EFFECTS OF AIRBNB HOSTS' QUALITY AND QUANTITY ATTRIBUTES ON RESERVATION PERFORMANCE: THE CASE OF HONG KONG

Dusang Zhao, Wenzhou-Kean University
Md. Jahidur Rahman, Wenzhou-Kean University

ABSTRACT

This study examined the effects of hosts' quality attributes on the reservation performance of their listings. It also determined whether the number of listings a host manages impacts the quality of the experience, which in turn affects reservations. We used the InsideAirbnb database to collect publicly available information about hosts and listings on Airbnb.com in Hong Kong in 2018. Our sample included 2,284 hosts in Hong Kong. We used a regression model to examine the effects of quality and quantity attributes on the reservation performance of these Airbnb listings. We found that the hosts' quality attributes, excluding the membership and local host attributes, positively influenced the number of reservations a host received. The results have implications for business development on sharing economy platforms and for hosts who wish to improve their trade.

Keywords: Airbnb, Listing Performance, Sharing Economy, Trust, Signaling.

INTRODUCTION

The boom in sharing economy platforms has enabled users to share and make use of underutilized goods (Ye et al., 2017). Levendis & Dicle (2016) showed that Airbnb, as an outstanding business in the sharing economy, has a significant impact on local economic development. Airbnb acts as an intermediary, facilitating the booking of shared accommodation; hosts post information about vacant spaces on the Airbnb website, where customers can choose their preferred accommodation. Such collaborative consumption platforms require a high level of trust between users. Thus, the information about the hosts and rental units displayed on the platforms are critical inputs into travelers' decisions (Ert et al., 2016).

Several streams of research have examined sharing economy platforms. Edelman & Luca (2014) found that when personal profiles are provided, non-black hosts charge more than black hosts for a comparable rental, indicating potential discrimination in the online marketplace. Similarly, Kakar et al. (2016) showed that hosts from Spain and Asia, on average, have lower listing prices than their white counterparts. Hancock et al. (2017) examined the perceived trustworthiness of profiles, and found that more extended self-descriptions are perceived as more reliable and more self-disclosure by the renter increases perceived trustworthiness. Furthermore, Ert et al. (2016) found that Airbnb hosts' photos had a substantial effect on customers' decisions. A more trustworthy host photo lead to a higher chance of the listing being chosen. Wu et al. (2016) demonstrated that most renters on Xiaozhu.com, a Chinese room-sharing platform, prefer female hosts. In other words, female owners are chosen more frequently than male counterparts when travelers or visitors are booking a private residence. Xie & Mao (2017) discovered that increases in the number of listings a host manages on Airbnb negatively moderate the positive effects of being a super host, membership, and response rate on the number of reservations.

Many scholars have examined the effects of hosts' demographic characteristics. Few have explored the effects of their non-demographic attributes. Although Xie & Mao (2017) investigated the relationship between the quality and quantity attributes of Airbnb hosts and listing performance, they only examined these relationships in a Western context. To bridge this gap, this study analyzed the same relationships in the context of Hong Kong. Drawing on previous studies, we examined the effects of five quality attributes of the host visible to guests on Airbnb: being a local host, being a super host, service response rate, length of membership on Airbnb, and identity verification (Xie & Mao, 2017). Based on a literature review, we hypothesized that quality attributes have a positive relationship with listing performance, whereas quantity attributes have a negative relationship with listing performance.

This study examined the effects of hosts' quality attributes on the reservation performance of their listings. It also determined whether the number of listings a host manages impacts the quality of the experience, which in turn affects reservations. We hypothesized that although hosts who manage more than one listing may be more skilled and sophisticated in dealing with listings and offer a better service to their renters, managing multiple listings may negatively affect hosts' attention to customers due to the reduction of host capacity per listing, so that the quality of the service will decrease. Thus, we hypothesize a dual effect of the host quality and quantity attributes on transactions on the Airbnb platform. Another aim of this study was to examine whether these effects are context specific (Hallikainen & Laukkanen, 2018).

We collected sample from Airbnb.com listings in Hong Kong. A linear regression model was used to estimate the relationships between hosts' quality attributes, number of listings, and reservation performance and how these variables affected listing performance. The results indicated that being a local host had no significant relation to listing performance, super hosts were likely to receive more housing reservations than regular hosts, there was a positive relationship between host response rate and the number of reservations, host membership was not associated with listing performance, and verified hosts generally had better listing performance than hosts who were not verified. We also found that an increasing number of host listings negatively moderated the effect of hosts' quality attributes on listing performing.

As far as we know, this study is the first to investigate the effects of hosts' quality and quantity attributes on reservations on Airbnb listing in Hong Kong. To some extent, this study extends established theories to the sharing economy. Applying online trust in a peer-to-peer model, we successfully demonstrated the significance of cue-based trust to customers. This study confirms the role of online trust in the context of Airbnb and demonstrates that online host information is a signal that establishes trust. The results have implications for business development on sharing economy platforms and for hosts who wish to improve their trade.

The rest of the paper is organized as follows. The theoretical framework and hypotheses development are presented in Section 2. Section 3 describes the research methodology. Section 4 presents the results which are discussed in Section 5. Section 6 presents our conclusions and Section 7 describes the implications of our research.

THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

Background

Numerous studies have examined the sharing economy, including studies of the concept of the sharing economy (Frenken & Schor, 2017) and its motivations (Böcker & Meelen, 2017). Scholars have shown that the nature of digital platforms promotes online exchange (Benkler, 2004). However, as consumers prefer to buy from providers that are perceived as reliable and of high quality (Gefen, 2002; Kim et al., 2008), recent studies have examined whether demographic factors influence consumers' perception of trust and their purchase decisions. Ma et al. (2017) examined the perceived trustworthiness of profiles and found that longer self-descriptions are considered to be more reliable, and more frequent self-disclosure topics are associated with increased perceived trustworthiness. Ert et al. (2016) found that Airbnb hosts' photos have a substantial effect on customers' decisions. Wu et al. (2016) demonstrated that female hosts are preferred by most renters.

Although these studies have successfully explained how the characteristics of host profiles affect the decisions of potential consumers, their scope has been limited. Few studies have explored hosts' non-demographic attributes. In addition, although Xie & Mao (2017) investigated the relationship between hosts' attributes and Airbnb bookings, they only investigated the relationship in a Western context. No one has investigated this relationship in Asia, where Airbnb is widely used. To bridge this gap, this study analyzed the relationship between number of listings, the social attributes of Airbnb hosts, and future reservation in the context of Hong Kong.

Hong Kong is as one of the hottest and most attractive touring places. The hotel price in Hong Kong, compared with other places, is extremely high. Such expensive accommodation fee drives many tourists to use sharing platform like Airbnb. According to Airbnb, in 2017, about 27.88 million passengers came to Hong Kong for the night, of which 460,000 stayed at the Airbnb Hotel. Airbnb community contributed HK$2.6 billion to Hong Kong's economy in 2017 and believed that sharing accommodation could promote sustainable tourism in Hong Kong. However, Hong Kong government strengthening the supervision over short-term leases will lead Airbnb facing a violent shock. Under such circumstance, hosts on Airbnb is going to be sifted by consumers and policy makers with more restrict evaluation.

Trust

There are many obstacles to success on Internet-based selling platforms; online trust is one of them (Chen & Barnes, 2007). Online trust plays an important role in e-commerce, and is an influential relationship between sellers and buyers. Traditional e-commerce is divided into e-business (e.g., on-line hotel bookings) and the sharing economy (e.g., Airbnb). It is essential to examine what role trust has in the evolving sharing economy platforms, such as Airbnb (Ponte et al., 2015). In general, e-business involves transactions between a company and a buyer (B2C model), whereas the sharing economy mainly involves two people (P2P model), who have diverse attributes and may have a low reputation. Conducting online business with hotels is very reliable, because the risks are reduced through standardized rules, security regulations, and business reputation (Blank, 2011). Different trust standards and perceptions will affect visitors' choice of a traditional hotel or an Airbnb listing. In the sharing economy, online trust has two constructive objects, the provider of the online trading platform, such as Airbnb, and another that is like the mainframe, but in traditional e-business, there is only one construct, that is, the company website. Airbnb does not directly promote the renter's trust in the hosts listed on the platform; however, it may increase the traveler's comfort.

Online trust can usually be conceptualized as experience or cue-based trust (Wang, 2001). Experience-based trust is formed when the buyer accumulates communications and experience with the seller, which is a type of learning behavior (Shim et al., 2001). In contrast, instant-based trust is based on the buyer's initial encounter with the seller's cues or signals (Wang et al., 2004). Kim et al. (2008) found that the premise of trust associated with travel websites is related to consumer perceptions of attributes such as security, privacy protection, and the quality of the information provided on the website. Cue-based trust is more applicable to the Airbnb setting, as even travelers who have used Airbnb before are unlikely to keep in touch with the same host in the same place. Therefore, signals are an important method for sellers to establish online trust with consumers (Möhlmann, 2016).

Signaling

Akerlof (1978) defined signaling theory as inducing suppliers to precisely describe their qualitative characteristics and facts to gain trust from buyers. Signaling theory provides a framework for understanding how two parties address the problem of information asymmetry in contractual exchanges (Auronen, 2003). There is information asymmetry between Airbnb's host and consumers. Consumers can only get limited information about the host through host profiles and consumer comments, and the host attempt to communicate trustworthiness to the consumer. Signals effectively influence consumer perception and consumer behavior (Boulding & Kirmani, 1993).

Consumers' form an impression of hosts and residences based on the materials or profiles posted on the Airbnb website. These are signals that help consumers' to make a decision (Ert et al., 2016). Therefore, signal theory provides a theoretical framework for connecting hosts' traits and consumers' renting decisions. Previous studies of signaling have shown that consumer interpretation of market signals and related decision-making processes are context-specific (Lee & Turban, 2001). Quality signals can take many different forms in the context of seller information.

Lee et al. (2015) identified five attributes of host quality that are listed on Airbnb: local host status; super host status; the rate of service responsiveness; length of membership; and whether the host's identity is verified. A local host is a host who lives in the same city as his or her housing listing. Lasker & Weiss (2003) argued that local hosts have more and better knowledge of the locations and more entrepreneurial abilities, which means they are more likely solve problems easily. At the same time, local host is able to offer facilities regarding transportation, local customs and travel guide, adding convenience to customer's trip. Based on this argument, we made the following hypothesis.

H1a: Local hosts will receive more reservations than non-local hosts.

A super host is a host who has been highly recommended by his or her previous consumers. The super host is identified based on their excellent performance, including high-quality service, excellent accommodation environment, friendliness, and more (Liang et al., 2017). Based on this definition, we made the following hypothesis.

H1b: Super hosts will receive more reservations than regular hosts.

The response rate is the number of customers a host responds to divided by the total number of customers. It is usually expressed in the form of a percentage. A high response rate implies a friendlier and more able host (Asree et al., 2010). Prospective customers are motivated to make a booking once they see high response rates. Thus, we made the following hypothesis.

H1c: Higher response rates will receive more reservations than the lower response rates.

The length of membership is quantified as the number of years a host has been a member of the Airbnb platform. According to learning theory, long-term hosts should have more knowledge and more efficient managing procedures (Zervas et al., 2017), which promote customer service, grow customer satisfaction, and increase orders. In addition, a long membership will increase potential customers' perceptions of the host as trustworthy and legitimate. Thus, we hypothesized the following.

H1d: Hosts with longer memberships receive more reservations.

"Identification verification" refers to whether Airbnb has verified whether the contact information, social media information, and ID number of the host are authentic. This identification verification helps users to distinguish between real and fake hosts (McKnight & Chervany, 2001). Verified host's listing is perceived safer. Therefore, we made the following hypothesis.

H1e: Verified hosts will receive more reservations than non-verified hosts.

Trade-off

The resource scarcity theory (Mccannon, 2008) suggests that quality and quantity are often in conflict with each other, because as the number of tasks increases, people or organizations are more likely to meet sourcing constraints. When resources are constrained, a certain quality cannot be assured (Ellway, 2014). Some scholars have stressed that an over-emphasis on increasing quantities will have a negative effect on quality (McCannon, 2008). Applying this theory to Airbnb suggests that when a host has more than one listing, the expected and perceived quality of each listing will be lower. Multiple listings will definitely increase the total number of reservations for the host. However, the decreasing quality of each listing may have a negative effect on future reservations. Therefore, we made the following hypothesis.

H2: An increasing number of host listings will have a negative effect on host quality attributes.

Conceptual Map

Independent Variable and Dependent Variable is shown in Figure 1.

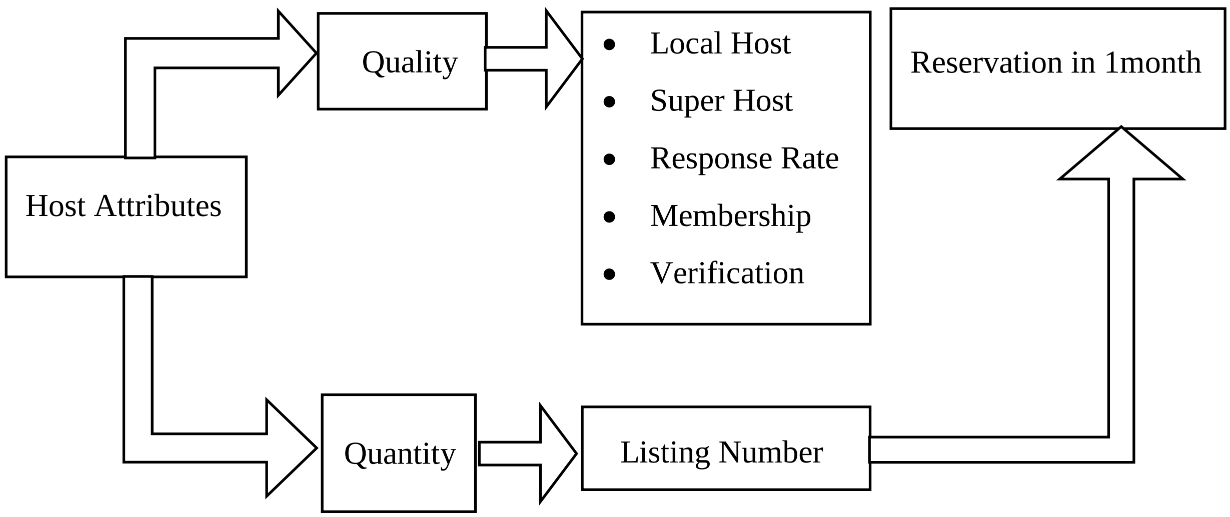

FIGURE 1
INDEPENDENT VARIABLE AND DEPENDENT VARIABLE

RESEARCH METHODOLOGY

Data and Measure

We used a deductive cross-sectional explanatory research design to investigate the relationships between the quality and quantity attributes of Airbnb hosts and the number of reservations. We applied online trust theory (Shankar et al., 2002)[1], signaling theory (Connelly et al., 2011)[2], and resource scarcity theory (Hussain & Windsperger, 2010)[3] to hypothesize and examine the correlations between the different variables. We used the Inside Airbnb database to collect publicly available information about hosts and listings on Airbnb.com in Hong Kong in 2018. Our sample included 2,284 hosts in Hong Kong. We used a regression model to examine the effects of quality and quantity attributes on the reservation performance of these Airbnb listings.

Model Specification

For each host, this study regressed the reservation performance in the next month of the Airbnb hosts on the host's quality attributes and the number of listings, which is the quantity attribute of the host, as well as their interactions. The model was as follows.

$$Reservation1Month = \beta_0 + \beta_1 ListNum + \beta_2 LocalHost + \beta_3 SuperHost + \beta_4$$
$$ResponseRate + \beta_5 Membership + \beta_6 VerifiedHost + \beta_7 ListNum \times LocalHost + \beta_8$$
$$ListNum \times SuperHost + \beta_9 ListNum \times ResponseRate + \beta_{10} ListNum \times Membership +$$
$$\beta_{11} ListNum \times VerifiedHost + \beta_{12} AveRating + \beta_{13} AveReviewNum + \beta_{14} AveBeds +$$

$$\beta_{15} AveAmenities + \beta_{16} AvePrice + e$$

Where,

Reservation1Month: Average number of bookings in the next month
Local Host: If a host is a Hong Kong resident value is 1, and otherwise 0
Super Host: If a host is a super host, the value is 1, and otherwise 0
Response Rate: Percentage of inquiries that a host has responded to
Membership: Number of years a host has been a member of Airbnb
Verified Host: If a host's identification is verified, value is 1, and otherwise 0
List Num: Number of listings a host has Average renter ratings
AveReview Num: Average number of renter reviews
AvePrice: Average price per night
AveBeds: Average number of beds
AveAmenities: Average number of amenities

Descriptive Analysis of Hosts

The descriptive statistics are presented in Table 1. Most of the hosts (67.21%) had one listing on the Airbnb platform, and about 32.69% managed more than one listing. Specifically, nearly 13.1% of the hosts had two listings, 9.63% had 3-5 listings, 5.52% had 6-9 listings, and 4.51% had more than 10 listings.

Table 1
DESCRIPTIVE STATISTICS OF AIRBNB LISTINGS

Host type	Number of listings	Frequency	Percentage
Single-listing host	1	1535	67.21%
Multi-listing host	2	300	13.13%
	3–5	220	9.63%
	6–9	126	5.52%
	More than 10	103	4.51%
Total		2284	100%

Table 2 presents the comparison of the characteristics of hosts with one listing with the characteristics of hosts with multiple listings on Airbnb. Hosts with multiple listings received about 3% more reviews than those with a single listing. Nevertheless, although multi-listing hosts charged lower prices and offered more beds and amenities than single-listing hosts, consumers did not necessarily rate them more highly.

Table 2
LISTING CHARACTERISTICS BY TYPE OF HOST

	Multi-listing Hosts		Single-listing Hosts	
	Mean	SF	Mean	SD
AveReviewNum	23.72	44.08	20.45	38.95
AveRating	91.52	8.54	94.65	8.72
AvePrice	719.27	610.04	820.00	675.27
AveBeds	2.01	1.57	1.66	1.08
AveAmenities	15.53	4.77	14.81	5.32

Most of the hosts (67.21%) had a price under HK$1200 on the Airbnb platform, presented in Table 3. Both single-listing host and multi-listing host have the lowest proportion in the price range from HK$1200 to HK$10004.

Table 3
PRICE PROFILE BY TYPE OF HOST

Price Range	HK$102-600	HK$600-1200	HK$1200-10004
Single-listing host	39.78%	47.62%	12.8%
Multi-listing host	43.25%	30.25%	25.6%

RESULTS

Table 4
ESTIMATIONS OF EFFECTS OF QUALITY AND QUANTITY ATTRIBUTES ON RESERVATIONS

	df	SS	MS	F	Significant F
Regression	46	11080.127	692.507	13.735	0.000
Residual	2138	48299.599	50.417		
Total	2284	59379.726			

Table 5
AVERAGE BED AND AVERAGE AMENITIES ATTRIBUTES NO RELATIONSHIP WITH THE NUMBER OF RESERVATIONS

	Coefficients	Standard Error	t-stat	P-value
Intercept	13.135	4.329	3.034	0.002
Membership	0.079	0.218	0.365	0.716
LocalHost	0.115	0.911	-0.126	0.900
ResponseRate	7.221	2.904	2.486	0.013***
SuperHost	4.352	0.905	4.808	0.000***
VerifiedHost	3.549	0.941	3.772	0.000***
ListNum	0.343	0.625	-3.746	0.000***
ListNum x Membership	0.327	0.146	2.240	0.025**
ListNum x LocalHost	-0.581	2.647	-0.219	0.026**
ListNum x ReponseRate	-0.813	2.741	-0.297	0.047**
ListNum x SuperHost	-0.901	0.623	1.446	0.049**
ListNum x VerifiedHost	-0.859	0.632	-1.359	0.174
AveBeds	0.366	0.216	1.691	0.091*
AveAmenities	-0.006	0.021	-0.266	0.791
AvePrice	-0.001	0.000	-2.747	0.006***
AveReviewNum	0.006	0.005	-1.211	0.026**
AveRating	0.029	0.033	0.890	0.034**

Note: *p<0.1; **p<0.01; ***p<0.001

As shown in Table 4, most of the hosts' attributes had a significant influence on reservation performance. Specifically, the number of reservations in the subsequent month were strongly influenced by host response rate, super host status, and verified identification. On average, more than seven reservations were generated by a 1% increase in the host's response rate (7.221, p=0.013). When other variables were constant, being a super host generated nearly four extra reservations (4.352, p<0.000). Moreover, the number of reservations increased by more than three for verified hosts (3.549, p<0.000). The length of time a host had been a member of Airbnb did not influence the listing performance (0.079, p=0.716). There was also no difference in the number of reservations for local and non-local hosts (0.525, p=0.407). Overall, the influence of host attributes on the number of reservations was significant.

The effects of the interaction of quantity and quality attributes on the reservation performance are shown in Table 4. The number of listings managed by a host had two effects on the number of reservations. There was a positive relationship between the number of listings and number of reservations for a listing (0.343, p<0.000). In other words, when a host owns more listings, they will receive more reservations on Airbnb. However, the interaction of the number of listings and quality attributes revealed a negative relationship with number of reservations for each listing. Overall, a local host who manages multiple listings has a weaker reservation performance than one who has only one listing (0.581, p=0.026). Similarly, the effects of a higher response rate on the number of reservations changed when the number of listings managed by the host increased (0.813, p=0.047). This pattern was also found for super hosts (0.901, p=0.049), which means that the positive influence of being a super host on the number of reservations was diminished when a host managed a number of listings. Interestingly, the interaction of identity verification and number of listing did affect future reservations (0.859, p=0.174), although verification itself had a significantly positive relationship with reservations. The interaction of length of Airbnb membership and multiple listings had a significantly positive correlation with listing performance (0.327, p=0.025).

Furthermore, the effects of control variables on the performance were examined and the results are given in Table 4. As shown in the last five rows, the number of reservations increased with higher average numbers of review (0.06, p=0.026). The average rating also had a positive relationship with number of reservations (0.029, p=0.034), as did the average price (0.001, p=0.6). Average bed and average amenities attributes, however, had no relationship with the number of reservations, as shown in Table 5 (0.366, p=0.091 and 0.006, p=0.791).

DISCUSSION

We found that many of the social attributes of Airbnb hosts had a significantly positive relationship with the number of reservations on their listings. The exceptions were length of membership and being a local host. These results generally support the signaling and online trust theories. Specifically, a high response rate leads to more reservations, indicating that Hypothesis 1c is supported. Super hosts receive more reservations, supporting Hypothesis 1b. Identity verification also has a significant positive effect on the number of reservations, supporting Hypothesis 1e. However, length of membership and being a local host do not have significant relationships with the number of reservations, indicating that Hypotheses 1a and 1d are not supported.

Our results are different from those reported by Xie & Mao (2017), who used a sample from Austin, Texas. They found that identity verification did not influence reservation performance, whereas a significant relationship was revealed in this study. Previous studies have suggested that understanding a host's online identity is an essential part of renting decisions on Airbnb (Lee et al., 2015). The guest chooses a host based on perceived trustworthiness, which is determined by rental unit and host information. Identity verification is a pervasive method of facilitating online trust (Green, 2007). Previous studies based on signaling theory have pointed out that customers perceive and interpret signals differently in different contexts. Thus, it is unsurprising that verified hosts receive more reservations than non-verified hosts.

The resource scarcity theory suggests that an excessive focus on quantity creates a higher risk of resource shortages. Applying this to our results, we see that hosts with more listings may have more restricted resources; specifically, they must distribute their attention, time, and effort across additional listings. In short, the hosts have to balance a trade-off between quantity and quality when they operate multiple listings. One unexpected result contradicts Hypothesis 2, an experienced host, as measured by length of membership, is more likely to have a positive relationship between number of listings and reservations. Although this outcome contradicts the resource scarcity theory (Mccannon, 2008), it is consistent with previous studies (Xie & Mao, 2017), suggesting that having multiple listings increases the number of bookings through more self-disclosure.

The reliability and validity of this research are strong. All of the data were drawn directly from the Airbnb.com database. Notably, the non-demographic characteristics of hosts and the renters' reviews were provided voluntarily without any time limits. Thus, participants' errors and biases are not a consideration. Furthermore, as the data were from an open database, they were not influenced by a lack of objectivity or bias.

CONCLUSIONS

This study of how Airbnb hosts' quality and quantity traits influence bookings in Hong Kong found that most of a host's quality attributes have a positive effect on prospective customers. However, two quality attributes, length of membership and whether a host is local, had no positive relationship with future reservations. Our investigation of how quantity attributes moderate the influence of quality attributes on reservation shows that holding multiple listings has two distinct effects on number of reservations. When a host manages multiple listings on Airbnb, the overall number of reservations increases. However, the interaction of number of listings and host quality attributes, including being a super host, being a local host, and having a higher response rate, produce a negative relationship with reservation performance. However, the interaction of identity verification and number of listings does not have any impact on reservations, and identification itself has a significantly positive relationship with reservations. Interestingly, length of membership on Airbnb, paired with an increasing number of listings, shows a significant positive correlation with listing performance.

This study has several limitations. First, the data on Inside Airbnb database is updated randomly and the information provided is a snapshot of listing reservation for at a given date rather than a consecutive documentary. Because other snapshots of previous dates are able to be obtained only by request, this research is not able to conduct a longitudinal analysis and provide a seasonal analysis while the time factor is extremely important in tourism and hospitality. Second, the data were directly gathered from the Inside Airbnb database, it is difficult to determine whether the numbers of listings for each host have been manipulated. In other words, if some hosts register several times, the listed attributes will not reveal the true non-demographic characteristics of each host. Thus, the estimation results may not be accurate. In addition, the booking schedule on the Airbnb platform does not make a distinction between a listing that is booked and a listing that is unavailable due to a personal decision of the hosts; instead, they are all presented as unavailable. We have assumed that an unavailable room is booked, but this means the availability metric is understated, which may lead to an overestimation of the influence of hosts' attributes. Moreover, due to the limited time and limited source accessibility, this study only uses readily available data, which means that some host quantity attributes, such as host response time and host acceptance, that may also affect reservation are not considered in this analysis. Further study is needed to address these limitations.

IMPLICATIONS

This study is the first to examine the relationships between quality attributes, number of listings, and reservations on the Airbnb platform in Hong Kong. A number of studies have addressed hosts' demographic characteristics, but few have examined hosts' non-demographic attributes. In addition, although Xie & Mao (2017) investigated the relationship between Airbnb hosts' quality and quantity attributes and the number of bookings, they only investigated the relationship in a Western context. However, Airbnb is also widely used in Asia, especially for places with high hotel prices.

To some extent, this study extends established theories to the sharing economy. Applying online trust in a peer-to-peer model, we successfully demonstrated the significance of cue-based trust to customers. Being a super host and being highly responsive signal the host's trustworthiness, which influences consumers' decisions. This study confirms the role of online trust in the context of Airbnb and demonstrates that online host information is a signal that establishes trust. Therefore, hosts and platform managers should use the signaling effect to develop stable online trust with their prospective customers.

The results have implications for business development on sharing economy platforms and for hosts. Airbnb may need to find ways to increase consumers' trust in their hosts. Airbnb hosts should post most host attributes to signal their trustworthiness, which will attract more reservations. Response rates can also be enhanced by paying more attention to message notifications, so that hosts respond promptly to their guests. Furthermore, Airbnb hosts need to put effort into gaining and maintaining a super host status, which is an online indicator of elite identity, reliability, and quality. Customers have recognized the significance of the program as an effective method for distinguishing the quality of hosts. In addition, identity verification is a good and effective signal. Previous studies have shown that customers prefer authentication as a means to evaluate the host.

ENDNOTES

1. Online trust is important in both business-to-business (B2B) and business-to-consumer (B2C) e-business. Consumers, feeling the pressure of electronic downturn and terrorism, are more likely to buy from organizations that ensures the most trusted Web sites. Similarly, business do business with organizations with the most trusted electronic networks.
2. Signaling theory is used to describe the behavior when two parties (individuals or organizations) have access to different information. Usually, one party (the sender) must choose whether and how to communicate (or signal) that information, and the other party (the receiver), must choose how to interpret the signal.
3. Resource scarcity is the lack of availability of supplies required to maintain life, or a certain quality of life. Scarcity is a perpetual problem for economic theory, which often assumes that humans have unlimited wants but must find ways to fulfill these wants using scarce resources.

REFERENCES

Akerlof, G.A. (1978). The market for lemons: Quality uncertainty and the market mechanism. In: *Uncertainty in Economics,* Academic Press, 235-251.

Asree, S., Zain, M., & Razalli, R.M. (2010). Influence of leadership competency and organizational culture on responsiveness and performance of firms. *International Journal of Contemporary Hospitality Management*, *22*(4), 500-516.

Auronen, L. (2003). Asymmetric information: Theory and applications. In: *Seminar of strategy and international business at Helsinki University of Technology*.

Benkler, Y. (2004). Sharing nicely: On shareable goods and the emergence of sharing as a modality of economic production. *The Yale Law Journal*, *114*, 273.

Blank, R.M. (2011). Guide for conducting risk assessments.

Böcker, L., & Meelen, T. (2017). Sharing for people, planet or profit? Analysing motivations for intended sharing economy participation. *Environmental Innovation and Societal Transitions*, *23*, 28-39.

Boulding, W., & Kirmani, A. (1993). A consumer-side experimental examination of signaling theory: Do consumers perceive warranties as signals of quality? *Journal of Consumer Research*, *20*(1), 111-123.

Chen, Y.H., & Barnes, S. (2007). Initial trust and online buyer behaviour. *Industrial Management & Data Systems*, *107*(1), 21-36.

Connelly, B.L., Certo, S.T., Ireland, R.D., & Reutzel, C.R. (2011). Signaling theory: A review and assessment. *Journal of Management*, *37*(1), 39-67.

Edelman, B.G., & Luca, M. (2014). *Digital discrimination: The case of Airbnb.com.* Harvard Business School NOM Unit Working Paper, 14-54.

Ellway, B.P.W. (2014). Is the quantity-quality trade-off in call centres a false dichotomy? *Managing Service Quality*, *24*(3), 230-251.

Ert, E., Fleischer, A., & Magen, N. (2016). Trust and reputation in the sharing economy: The role of personal photos in Airbnb. *Tourism Management*, *55*, 62-73.

Frenken, K., & Schor, J. (2017). Putting the sharing economy into perspective. *Environmental Innovation and Societal Transitions*, *23*, 3-10.

Gefen, D. (2002). Reflections on the dimensions of trust and trustworthiness among online consumers. *ACM SIGMIS Database: The DATABASE for Advances in Information Systems*, *33*(3), 38-53.

Green, M.C. (2007). Trust and social interaction on the Internet. *The Oxford handbook of Internet psychology*, *56*, 43-51.

Hallikainen, H., & Laukkanen, T. (2018). National culture and consumer trust in e-commerce. *International Journal of Information Management*, *38*(1), 97-106.

Hussain, D., & Windsperger, J. (2010). Multi-unit ownership strategy in franchising: Development of an integrative model. *Journal of Marketing Chann*els, *17*(1), 3-31.

Kakar, V., Franco, J., Voelz, J., & Wu, J. (2016). Effects of host race information on Airbnb listing prices in San Francisco.

Kim, D.J., Ferrin, D.L., & Rao, H.R. (2008). A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and their antecedents. *Decision Support Systems*, *44*(2), 544-564.

Lasker, R.D., & Weiss, E.S. (2003). Broadening participation in community problem solving: A multidisciplinary model to support collaborative practice and research. *Journal of Urban Health*, *80*(1), 14-47.

Lee, D., Hyun, W., Ryu, J., Lee, W.J., Rhee, W., & Suh, B. (2015). An analysis of social features associated with room sales of Airbb. In: *Proceedings of the 18th ACM Conference Companion on Computer Supported Cooperative Work & Social Computing*, 219-222. ACM.

Lee, M.K., & Turban, E. (2001). A trust model for consumer internet shopping. *International Journal of Electronic Commerce*, *6*(1), 75-91.

Levendis, J., & Dicle, M.F. (2016). The economic impact of Airbnb on New Orleans. *Journal of Marketing Research*, *54(5*), 687-705.

Liang, S., Schuckert, M., Law, R., & Chen, C.C. (2017). Be a "superhost": The importance of badge systems for peer-to-peer rental accommodations. *Tourism Management*, *60*, 454-465.

Hancock, J.T., Ma, X., Lim, M.K., & Naaman, M. (2017, February). Self-disclosure and perceived trustworthiness of Airbnb host profiles. In: *Proceedings of the 2017 ACM Conference on Computer Supported Cooperative Work and Social Computing*, 2397-2409. ACM.

Mccannon, B. (2008). The quality-quantity trade-off. *Eastern Economic Journal*, *34*, 95-100.

McKnight, D.H., & Chervany, N.L. (2001). What trust means in e-commerce customer relationships: An interdisciplinary conceptual typology. *International Journal of Electronic Commerce*, *6*(2), 35-59.

Möhlmann, M. (2016). Digital trust and peer-to-peer collaborative consumption platforms: A mediation analysis. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstractid=2813367.

Ponte, E.B., Carvajal-Trujil, E., & Escobar-Rodríguez, T. (2015). Influence of trust and perceived value on the intention to purchase travel online: integrating the effects of assurance on trust antecedents. *Tourism Manage*. *47*, 286-302.

Shankar, V., Urban, G.L., & Sultan, F. (2002). Online trust: A stakeholder perspective, concepts, implications, and future directions. *The Journal of Strategic Information Systems, 11*(3-4), 325-344.

Shim, S., Eastlick, M.A., Lotz, S.L., & Warrington, P. (2001). An online prepurchase intentions model: The role of intention to search: Best overall paper award-the sixth triennial AMS/ACRA retailing conference, 2000. *Journal of Retailing*, *77*(3), 397-416.

Wang, S. (2001). Cue-based trust in an online shopping environment: Conceptualization and propositions. In: *Marketing advances in pedagogy, process and philosophy, Proceedings of the Annual Meeting of the Society for Advances in Marketing*, 6-10.

Wang, S., Beatty, S.E. & Foxx, W. (2004). Signaling the trustworthiness of small online retailers. *Journal of Interactive Marketing*, *18*(1), 53-69.

Wu, J., Ma, P., & Zeng, M. (2016). The role of service-provider's attributes in sharing economy: A data-driven study from the perspective of trust. In: *WHICEB, 61*.

Ma, P., Wu, J., & Xie, K.L. (2017). In sharing economy we trust: The effects of host attributes on short-term rental purchases. *International Journal of Contemporary Hospitality Management*, *29*(11), 2962-2976.

Xie, K., & Mao, Z. (2017). The impacts of quality and quantity attributes of Airbnb hosts on listing performance. *International Journal of Contemporary Hospitality Management*, *29*(9), 2240-2260.

Ye, T., Alahmad, R., Pierce, C., & Robert, L.P. (2017). Race and rating on sharing economy.

Zervas, G., Proserpio, D., & Byers, J.W. (2017). The rise of the sharing economy: Estimating the impact of Airbnb on the hotel industry. *Journal of Marketing Research*, *54*(5), 687-705.