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# Viewing Airbnb from Twitter: factors associated with users' utilization

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## Abstract

Airbnb is a peer-to-peer accommodation website in the sharing economy. Past studies have examined the factors associated with Airbnb utilization from various platforms, but not exclusively from Twitter. A total of 21,097 tweets was collected in a period of two months, and the tweets were qualitatively analyzed with the help of text analysis tools to verify the discourse of discussion. Literature was reviewed for common factors attracting clients to an Airbnb accommodation. Factors were then qualitatively analyzed and compiled using Wmatrix, and the themes that emerged were: Price and status, social interaction and communication, location, reputation, amenities and a pet-friendly environment. This result provides a deeper insight to Airbnb hosts to strategize and add value to their current market situations.

## CCS CONCEPTS

• Information Systems • Sentiment Analysis

## KEYWORDS

Airbnb, Sharing economy, Tweets, Price and status, Pet-friendly environment

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## 1. Introduction

Big social data has become an important source for value creation due to its increasing availability and wealth of information [1].

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Analysis of Twitter content has attracted attention from various sectors, such as tourism [23], traffic management [4] and governance [5].

Airbnb is an online platform that connects individuals who want to rent out their homes with individuals who seek accommodation. It is also often used for short-term rental accommodation [6]. Since its establishment in San Francisco in 2008, Airbnb has experienced rapid growth, providing a total of six million accommodations in more than 100,000 cities across 191 countries [7].

Various studies have been conducted to understand the common reasons among customers for choosing an Airbnb home over more traditional accommodations such as hotels and motels. The rental price of Airbnb homes has been found to be the main reason [8, 9], while some other studies also associate the reasons to cultural and social factors [10-17]. Cheng and Zhang (2019) highlight the importance among the guest-host experiences and revealed that the guest-host experiences varies, mainly in the guests' daily regime and lifestyles, cultural background, and language barriers, in the context of Western hosts and Chinese guests [18]. Host and guest from different background generated different Airbnb experiences.

Online reviews and comments can affect consumer choice, influencing consumers' perceived value such as the intention to revisit an Airbnb home [19]. User preference and expectations are highly relevant [20] as high consistency of agreement between the human raters' evaluation influenced consumers' expectations and final choices [21].

The methodological approach to data collection for all aforementioned studies was in the form of surveys and interviews. There is a need to enhance the data collected by using qualitative research [22]. Therefore, the present qualitative study aims to discover through Twitter the factors motivating customers to utilize the Airbnb service. In investigating this scenario, the main question posed in this study is "What are the factors associated with consumers' utilization of an Airbnb service?"

## 2. Literature Review

This current study aims to expand the Airbnb literature review conducted by Guttentag (2019) [23]. Guttentag grouped extant Airbnb research literature from 2013 to 2019 into the following six

thematic categories: Airbnb guests, Airbnb hosts, Airbnb supply and its impact on destinations, Airbnb regulation, Airbnb’s impact on the tourism sector, and the Airbnb company itself. In Guttentag’s study [23], we see a need to further investigate newly emerged factors such as guest motivation and geographical distribution. In addition, only 18.5% of the research published utilized a qualitative approach and the raw data used was mainly extracted from the Airbnb website directly, not from other online platforms such as Twitter.

Building on the work of Guttentag (2019) [23], by using Wmatrix, this study offers another way of exploring the determining factors for choosing an Airbnb home among consumers. We conducted a literature review on recent reported factors that motivate customers to use an Airbnb service. Table 1 focuses solely on research published between 2014 and 2020, where the recent reported factors are summarized into six categories. The findings for each of the identified factors are then subsequently described.

Table 1. Literature review and factors that motivate consumers to choose an Airbnb service (2014–2020)

Study	Price and Status	Social Interaction and Communication	Location	Reputation	Amenities	Pet friendly environment
[6]	y	y	y		y	
[8]					y	
[9]		y	y	y	y	
[11]		y	y	y	y	
[15]				y		
[16]		y				
[10]		y	y		y	
[12]		y				
[13]	y	y		y		
[14]		y			y	
[17]	y	y	y			
[24]						y
[25]			y		y	y
[26]	y			y	y	
[27]				y		
[28]		y	y	y		
[29]					y	
[30]	y					
[31]	y					
[32]				y	y	
[33]		y			y	
[34]				y	y	
[35]		y				

Y= yes

### 2.1 Price and status

Previous studies have identified price as one of the main determinants for choosing an Airbnb home [31] and predicted individuals’ overall valuation of the Airbnb [30]. Airbnb accommodations that are equipped with amenities and services usually come at a higher price. For example, there will be an increase of 11% in price for Airbnb homes that come with free breakfast and 6%–10% for access to washers and dryers [36]. This may suggest that people would not mind in paying Airbnb with higher prices that include amenities and services that would provide convenience during their stay.

Sthapit and Jiménez-Barreto (2018) [17] showed that 2 out of 13 participants of Spanish nationality indicated that price is the main factor influencing their choice of accommodation. On the other hand, Kakar et al. (2018) [13] found that, on average, Asian and Hispanic hosts charge 8%–10% lower than their White counterparts on similar properties. However, no further study was done on differences in prices between races. Nevertheless, despite the price being portrayed as a critical factor by several researchers, Cheng and Jin (2019) [11] found that price is not a leading consideration in their study.

A “Superhost” status is awarded to Airbnb hosts who meet the following four criteria: have hosted 10 or more guests over a period of one year; 80% of the reviews received are rated 5 stars, have a 90% response rate, and a 0% cancellation rate on any confirmed order. Hosts with this status are reported to list the price of their properties higher by 5% compared to any ordinary host [36]. With higher reviews, rates and rating scores, Superhosts are viewed as having a trustworthy reputation among consumers [37]. Thus, Superhosts enjoy a better value proposition and can influence consumer selection [38]

### 2.2 Social interaction and communication

The characteristics or personality traits of hosts emerged as an essential topic of discussion in the study of Cheng and Jin (2019) [11] proving that ‘host-guest interaction’ influences consumer choice. A platform such as Airbnb can promote direct interaction between hosts and local and international guests. As hosts are often local individuals of the place or country, they able to share their personal experiences or preferences on places to go [30]. The more relaxed nature of the Airbnb model as a source of accommodation has helped consumers create a better stay, and it was cited that guest experience is made more memorable when guests are exposed to authentic local culture and social connection with the local [39].

Likewise, Sthapit and Jiménez-Barreto [17] found that Airbnb users share a positive and memorable experience when they engage in more social interaction with the host. A face-to-face interaction is commonly reflected as a valuable experience in enriching a guest’s travel experience [14]. Interviews conducted in the study by Lyu et al. (2018) [14] also revealed that most interviewees expected to meet the host and share the local lifestyle while living with them. Similarly, Tussyadiah and Zach (2017) [9] found that guests prefer hosts who make them feel comfortable and welcomed into their homes. These findings confirm social interaction as a growing factor motivating consumer choice. It is worth to note that the perception of Western customers may differ significantly from their Eastern counterparts [14]. The study by Lyu et al. (2018) [14] focused solely on the China market and may not be sufficiently comprehensive for generalization.

Hosts who are helpful, flexible and communicative were found to be a factor that could influence accommodation preferences [11]. Hosts who are contactable, greatly responsive, willing to consider compensation, and authentic in their hosting experience were also reported to contribute to consumers' overall positive experience [12]. In addition, hosts who speak the same mother tongue with consumers were perceived as important in providing a good Airbnb experience [17]. The ease of gathering of information by speaking the same language promotes greater convenience during one's stay.

Language plays a vital role in communication and although existing researchers have highlighted a variety of similar characteristics of host in their interaction with guests, researchers tend to overlook the importance of language used in communication across different countries. As a result of ineffective communication, 'racism in sharing economy' has emerged as an aspect in some literature where there is substantial evidence of accusation among hosts and Airbnb users, or vice versa [40]. Thus, it would be interesting to examine the characteristics of hosts as perceived by guests if accusation of racism is reported among the tweets.

### 2.3 Location

Guests tend to stay in Airbnb homes that are close to the main highlights and other attractions of a particular city [17]. Location is a significant factor that emerged in review comments with a likelihood score of 100%, which means location is the sole factor contributing to consumer choice [11]. Liu and Mattila (2017) identified the uniqueness of a location to be a powerful factor in attracting customers [33].

Airbnb accommodations that are positioned as positive and memorable stays gained higher attention among customers [17]. Positive comments or tweets accompanied with hashtags such as #the right place for the family, #friendly host, and #a nice home have indirectly contributed to consumers' selection, and ultimately decision, to book said accommodation [10, 11]. In contrast, Airbnb accommodations that are located in high-density areas with a great level of noise pollution and also in close proximity to the coast were considered to be negative Airbnb experiences [11, 25].

### 2.4 Reputation

Previous studies on sharing economy platforms highlighted the effects that a brand's reputation can have on its economic value. The economic value ranges from recommendations, star ratings, online reviews scores, popularity, and trust of consumers [11, 13, 15, 20, 26, 27]. A positive or negative recommendation on social media affect other consumers' intentions to share and re-share the recommendation online [41].

Reputation is identified as an emerging factor in consumer choice [15, 16], as there is an increased number of consumers who rely on online reviews to base their decision-making [27]. The effects of reputation can be long-term as reputation also affects consumers' rebooking intention over the pre-booking, booking and post-booking periods. A damaged reputation can draw away incoming capitals even though the host is dutiful and independent.

### 2.5 Amenities

Amenities at an Airbnb accommodation range from swimming pools and hot tubs to Wi-Fi and free parking [25]. Amenities are

found to be an influencing factor among Americans and Indian consumers [29]. It was reported that Americans are highly individualistic and tend to prioritize amenities that promote experiential leisure experiences (e.g., availability of swimming pool), while their Indian counterparts focus more on functional amenities instead (e.g., availability of free parking) [29].

Facilities such as kitchen, showers, beds, sheets, and rooms, among others, were ranked as an influencing factor in a study by Brochado et al. (2017) [10], while Cheng and Jin (2019) [11] found amenities, essential facilities and the environment to be crucial among customers. In terms of property types, Abdar et al. (2017) [20] showed that apartments, houses and "bed & breakfasts" are preferred by customers in the United Kingdom, Germany, Russia and Australia. In summary, consumers tend to search for accommodations with well-equipped home facilities [14], and Airbnb homes with higher amenities listings tend to attract more customers [8].

### 2.6 Pet-friendly environment

In recent years, many individuals and families travel with animals (pets) to enrich their travel experience [42]. This new culture has been shown to increase their intention to revisit accommodations that have a pet-friendly environment [43]. While pet-friendly accommodations are abundant in some parts of the world, some countries are less ready to incorporate this aspect of tourism in the sharing economy [44]. For example, although 64% of New Zealanders own a pet, the pet tourism industry is still at its infancy stage [45].

## 3. Methodology

### 3.1 Research design

Previous studies were explored mainly through interviews and survey questionnaires. Our study is unique in that we retrieved information from 21,097 tweets on Twitter, a platform which had not been used for data collection in Airbnb research. With the data collected from tweets, we adopted a hermeneutic phenomenology approach where the study primarily focused on the subjective experience of individuals and groups. We attempted to examine and review the perspectives of the participants and report the Airbnb experience through their tweets as a form of direct data. This approach will allow researchers to study consumers' direct Airbnb experience and avoid obstruction "by pre-conceptions and theoretical notions" [46].

In addition, this study further extended the work of Brochado et al. (2017) [10], who used only 1,776 text reviews with a limited focus on three countries (India, Portugal and the US), and Chang and Wang (2018) [27] who used a total of 200 reviews from the Airbnb website in their discussion.

### 3.2 Data collection

The data set was obtained from the Twitter website (<https://twitter.com/home/>) with a total of 21,097 review comments from March 2019 to May 2019. The review comments are publicly accessible. Ethical approval was not required as this study did not involve any interaction or intervention with human subjects [22] and only involved data from existing posts [47]. Non-English data and tweets without location were removed, leaving a total of 13,902

comments in English. Tweets tagged with #Airbnb hashtags were compiled. The data analysis was performed by the text mining software Wmatrix.

### 3.3 Data analysis and interpretation

With the data collected from Twitter Archiver, we adopted the hermeneutic phenomenology approach where the subjective experience of individuals and groups are the primary focus of this study. We attempted to examine and review from the perspective of the participants and report the Airbnb experience through their tweets as a form of direct data. This approach will allow researchers to study consumers’ direct Airbnb experience and avoid “obstructed by pre-conceptions and theoretical notions” [46].

The data analysis involved three steps. First, we extracted tweets containing the word “Airbnb” and performed a detailed reading of the tweets at sentence level. We explored the most-used terms that are relevant to consumers’ motivation to utilize an Airbnb service. Figure 1 shows the collection of words ending with the “-ing” gerund and its concordance relevant to consumers’ motivation factors. Through examination, repeated and irrelevant words such as “from”, “of”, “you” and “the” were deleted. Then, the collection of words was presented among researchers and Wmatrix was used to summarize the frequency of term.

Second, we analyzed the occurrences of the words (Figure 2) as collected by Wmatrix to examine the themes and subthemes associated with consumers’ motivation factors to utilize an Airbnb service.

Third, we highlighted, selected and grouped the keywords associated with the motivation factors. The tweets were then read in their contexts [46] by another researcher to confirm the grouping.

Word	Semtag	Frequency	Relative Frequency	
#comfortcottagehealing	Z99	51	0.10	Concordance
staying	M8	41	0.08	Concordance
amazing	O4.2+	35	0.07	Concordance
booking	A9+	34	0.07	Concordance
listing	Q1.2	26	0.05	Concordance
doing	A1.1.1	23	0.05	Concordance
being	A3+	22	0.04	Concordance
everything	Z8	21	0.04	Concordance
having	A9+	21	0.04	Concordance
spring	O2	19	0.04	Concordance
something	Z8	18	0.04	Concordance
renting	I2.2	18	0.04	Concordance
using	A1.5.1	17	0.03	Concordance
#marketing	Z99	17	0.03	Concordance
#booking	Z99	16	0.03	Concordance
morning	T1.3	16	0.03	Concordance
offering	A9-	16	0.03	Concordance
housing	H1	16	0.03	Concordance
getting	A9+	16	0.03	Concordance
working	I3.1	15	0.03	Concordance
thing	O2	15	0.03	Concordance
sharing	S1.1.2+	14	0.03	Concordance
livestreaming	Z99	13	0.03	Concordance
trying	X8+	13	0.03	Concordance
interesting	X5.2+	13	0.03	Concordance
getting	A2.1+	13	0.03	Concordance
walking	M1	13	0.03	Concordance
making	A1.1.1	12	0.02	Concordance
going	M1	12	0.02	Concordance
waiting	T1.3	12	0.02	Concordance

Figure 1. Snapshot of Wmatrix on the frequency of words that end with the “-ing” gerund and its concordance.

41 occurrences.				Extend context
start !! #fame #television #acting	Staying	in #Ireland this weekend. ! #Airbnb	1	More   Full
rbnb Love it when the friends were	staying	with are experienced at #airbnb . A	2	More   Full
#handyman Keep your eyes open when	staying	away from home - not all people hav	3	More   Full
Just look at this kitchen , fancy	staying	here ? . Head to the blog , and rea	4	More   Full
the guest whom it turned out wasnt	staying	. Hed actually booked it for his So	5	More   Full
um soon , photo of Airbnb will be	staying	at has bottles of laffe bierre on t	6	More   Full
stolen from the airbnb where we r	staying	. The owner says his daughter is a	7	More   Full
tner shop etc with me ? ! Everyone	staying	in my Airbnb lent getting here till	8	More   Full
and we may never leave ? ? We are	staying	at an amazing Airbnb ... Home Farm	9	More   Full
astique #fraymarine We have guests	staying	at the beach house for New Year . I	10	More   Full
.... we cant remember where we are	staying	? ! ? Hotel/hostel/Airbnb who know	11	More   Full
to scale your CX operations while	staying	relevant to each customer and much	12	More   Full
and stay in ? #ridaze If you are	staying	in an #AirBnB , and the owners live	13	More   Full
my airbnb in orlando The Airbnb im	staying	in has a Great Dane ! ! Can I cuddl	14	More   Full
so party ! Wow what an evening ? ?	Staying	in an Airbnb in Richmond . #AFLTige	15	More   Full
#poptopia pls hit me up I think im	staying	the weekend in San Jose ( at least	16	More   Full
n Airbnb type place ? And why ? Im	staying	in an airbnb and the host is Morocco	17	More   Full
sitting is great because its like	staying	in an airbnb but youre being paid t	18	More   Full
y . ) the airbnb my mates and i are	staying	in has TASTE they left us with perk	19	More   Full
ter ! Definitely a life saver when	staying	in a secluded Airbnb in a remote ,	20	More   Full
g to Dubai for a week - First time	staying	in an Airbnb for a week . These are	21	More   Full
a big family holiday Bn and we are	staying	in an Airbnb , the problem is that	22	More   Full
forward slash closets to scream in	Staying	in a Airbnb did nt know #Subtronics	23	More   Full

Figure 2: Snapshot of Wmatrix on the occurrences for one the words (“staying”) from Figure 1. Words in the boxes were used for theme analysis.

## 4. Results and discussion

From the collection of tweets, we established the following six themes: Price and status, social interaction and communication, location, reputation, amenities, and a pet-friendly environment. Our findings support and expand the study conducted by Guttentag (2019) [22] in a few areas, identifying other motivating factors such as price and legislation.

### 4.1 Price and status

From the study, we found that customers place an emphasis on affordable accommodations with good locations and reputable hosts. Customers’ experience with Airbnb and hotels shared some common attributes towards customers’ final preference or decision and customers tend to use the standard of traditional hotels as a benchmark against which the Airbnb experience and price are evaluated. They also harbor expectations for Airbnb homes to have a similar or minimum standard found in traditional accommodations [8, 9].

Exhibit 1: “Great location, you can walk to the center part where there is cafes and restaurants. Friendly staff working. Nice and clean place. We enjoyed our stay.”

Exhibit 2: “When travelling #Airbnb is my go to for affordable accommodations in the best locations.”

Exhibit 3: “Oh please.... these hotel conglomerates need to sit the XXX down. If anything #airbnb is helping our tourism industry because now locals can afford to travel too, we don't need to pay exorbitant hotel costs.”

It is interesting to note that one of the tweets (Exhibit 4) highlights the limited Airbnb options for affordable accommodations in Edinburg, Scotland, denoting a deterioration in the business. Being young, unemployed, and without financial sustainability have resulted in difficulty for the young generation today to find a place to live or travel. Coupled with these factors, the Airbnb business in Edinburgh is fading as the main accommodation selection for consumers. This reality adds a new, albeit contradictory, perspective on the Airbnb service, which was found in major

studies to be among the most popular accommodation services [10, 48]. Our result is not conclusive given that only one tweet highlights the above concern. The tweet, however, does shed light on Airbnb's possibly detrimental effects to a community as a whole, where the cost of living and rent prices nearby Airbnb homes may increase in view of the homes' listing popularity.

Exhibit 4: "Airbnb is hollowing out Edinburgh. It's becoming increasingly difficult for a young person on a low income to find an affordable place to live or travel. Add zero-hour contracts and climate change to the mix and being young starts to feel like a rigged game. #airbnb"

Our study found an aspect on pricing and legislation (Exhibit 5 and Exhibit 6). In Africa, regulations and legislation are in place to govern the operation of Airbnb and have been lately strengthened in view of the 325% growth in the Airbnb service across Nigeria [48]. Traditional hotel operators view the legislative changes as providing a fair and structured ground for all market players, but Airbnb owners feel restricted and burdened with the need to pay taxes or levies. Further, the legislation not only limits the location of Airbnb homes, night stays, and short-term rental regulations but also the price a host can charge for his/her home, thus reducing the amount of income earned. In most countries such as China and those in Europe and North America, local legal systems are in place to oversee activities in the sharing economy, yet the cost of living and rent prices have increased in areas where Airbnb is popular. The implementation of legislation invites both for and against arguments, especially from the African participants whose tweets were included in the study.

Exhibit 5: "The South African government is about to regulate #Airbnb (limiting location, nights stayed, income earned, etc)."

Exhibit 6: "While #Airbnb had unleashed the world's appetite for #vacationrentals, it couldn't deliver on the predictable quality of a hotel, and has been entangled in legal challenges in NYC from inception."

Hosts who obtain a "Superhost" status and tweet about their achievement will attract consumers (Exhibit 7). The status as a "Superhost" is associated with economic value (i.e. listing price of an Airbnb) [38]. Our finding is consistent with previous studies where higher scores of reviews is associated with positive reputation [37], which directly influenced consumer selection and increased the listing prices [37]. Consumers are more willing to pay a higher price when they perceive hosts as reputable and having a history of good reviews from other users. Hosts utilize the "Superhost" status as a tool to promote and advertise their services, which is done by displaying the visible "Superhost" badge on their page [37]. It has also been reported that with a "Superhost" status, the Airbnb unit price increases by 8.73% [31]

Exhibit 7 – "Today we received Superhost status on @airbnb ! We have enjoyed all of our past guests and look forward to what the future brings!"

In line with the findings by Cheng and Jin (2019) [11], our findings also reveal that Airbnb recommendations are born out of positive guest experiences. Guests who find hosts trustworthy and accommodating and the Airbnb homes comfortable and pleasant, could inspire them to rebook and recommend the homes to others.

In summary, our findings show that price and its associated factors contribute to the utilization of an Airbnb service among consumers. Price alone may not be able provide a comprehensive view and it should be studied within the context of the community, legal framework, and the brands (e.g., super host status) associated together as a whole.

## 4.2 Social interaction and communication

Social interaction covers multiple concepts, including the role the hosts play and the interaction they have with guests to enhance an Airbnb experience. The main ideas that emerged from our finding, unlike those found in previous studies, include "generous" hosts and "homey" accommodations. A generous host does not only refer to the services offered by the host within the accommodation, but also the host's willingness to go the extra mile, e.g. making brunch for guests without a fee (Exhibit 1). Some other examples of generosity include the host's willingness to pick up or drop guests at certain destinations without additional charge or provide additional information prior to the guest's arrival. In addition, our finding shows that Airbnb users tend to look for accommodations that are "homey" (Exhibit 2).

Exhibit 1: "Okay, so I'm not saying that my Airbnb host is the best ever, but...she made extra brunch for me and brought it down, so I'm not NOT saying that, either."

Exhibit 2: "Something guests love about booking someone else's home over a traditional hotel room is the 'Home away from Home' feeling."

In our study, communication is reported to be a form of language barrier. Similar to previous studies, our finding reveals that Airbnb users prefer hosts with whom they can speak the same language for clearer communication [17]. However, our finding also reveals instances of racism that arise out of misperception (Exhibit 3). In addition, certain social behavior is misperceived and reported as associated with a certain culture (Exhibit 4).

Exhibit 3: "I just had a terrible experience with my @Airbnb host. I was initially accused for having a guest over even though I was alone the entire time. One of the hosts said he thought he heard a "big black woman." ! #racism #airbnb"

Exhibit 4: “The top five #challenges associated with hosting #Chinese #Airbnb guests – mess, manner, communication, house rules, bathroom.”

### 4.3 Location

Location essentially means the proximity of an accommodation to major tourist attractions, transport system, or points of interest. Concepts which emerged from our findings are the physical location to access public transport (taxi stand), point of attractions, atmosphere (tranquil, peaceful, isolated, and view), distance (walking distance) and facilities (restaurants, bed, and breakfast). In contrast with host interaction, some guests prefer their host to be more interactive while others prefer an Airbnb where the host does not live nearby (Exhibit 3). Yet, in line with the findings in Cheng and Jin (2019) [11], our results also reveal that noise disturbance is the only negative concept associated with a good location. Nevertheless, this was treated as a negligible concern since users normally place a higher value on convenient locations. Below are some quotes which exemplify our findings:

Exhibit 1: “An excellent AirBnB! The location is ideal;right next to the old city!Could walk to everything easily yet also convenient to leave city for day trips.apartment spacious and well set up for families; a babysitter too.”

Exhibit 2: “Rowdy parties, noise and damage from #Airbnb rentals are causing major headaches”

Exhibit 3: “I prefer AirBnB's where the owner doesn't live next door”

### 4.4 Reputation

This factor covers a variety of items including reviews, ratings, renting, property, recommend and regulation for most of the tweets. From our finding, terms and phrases such as “trust”, “awesome place to stay”, “the host was so interesting”, “very accommodating”, “highly recommend” appear in high frequency. Contrary to previous studies [15, 16], our finding shows that Airbnb users either trust reviews online (Exhibit 1) or view them sceptically due to a potentially biased review system (Exhibit 2).

Given that 95% of Airbnb properties are reviewed and given 4.5 to 5.0 stars [49], it is plausible that consumers are less convinced with the authenticity and validity of the raking system. Yet, it is interesting to see reputation appearing constantly as a determinant in consumers’ rebooking intention [15, 16]. One of the possible explanations would be that consumers depend solely on one review platform (i.e., Airbnb website) to base their decision- making. Instead, they should consider reading reviews available in different platforms, especially those available in competitors’ platforms such as HomeToGo and Tripping.com.

Below are some quotes which exemplify our findings:

Exhibit 1: “Found out about this place while reading one of the reviews on #Airbnb. Can always trust on the #travel community.”

Exhibit 2: “#AirbnB shows customer reviews chronologically and does not let customers selectively view reviews based on star ratings. Seems like a systematic bias towards hosts and against customers”

### 4.5 Amenities

Besides the comment on amenities as studied and reported by previous studies [10, 11], our findings reveal that Airbnb users value comfortable and homey accommodations as much as the amenities provided (Exhibit 1 and 2). The amenities do not only serve basic needs but are reported to create an added recreational value to consumers who use Airbnb homes for relaxing and/or mediating purposes (Exhibit 3). There appeared to be an integration between daily accommodation selection and individual’s well-being among Airbnb consumers. Guest, besides having a place to stay in, uses the Airbnb for multiple purpose such as for spiritual activities and thus making the Airbnb experience, a more holistic experience.

Below are some quotes which exemplify our findings:

Exhibit 1: "The place was much bigger than expected and had all the amenities and was very clean, and most importantly warm on a cold night!"

Exhibit 2: "place is so cozy and homely! We stayed here for a long weekend and had a lovely time! The location is perfect... close to all the local amenities. The apartment has everything you need"

Exhibit 3: “I really love this kind of #urban structure wall.... Its a good resting area, comfort, windy and quiet. I like to do #reading, #meditation at this place... #airbnb #homestaynalaysia #breezystudio #univ360

Our findings also reveal guests’ disappointment with their stay due to reasons such as noise, lack of certain facilities, and invasion of privacy. Amenities that provide security to both consumers and hosts such as hidden cameras received mixed outcomes (Exhibits 4, 5 and 6). Privacy is a great concern to consumers, yet the usage of hidden cameras may be of benefit to renters who can also use them to ensure the security of their belongings. However, the latter would require renters to inform their guests of the arrangement prior to check-in, and an agreement should be signed between both parties. Mutual understanding and agreement among relevant parties demonstrate respect and are a crucial element in the sharing economy.

Exhibit 4: “Airbnb Has a Hidden-Camera Problem”

Exhibit 5: “If you are an #airbnb user, this is a good read. It is interesting to note that @Airbnb allows renters to use hidden cameras (as long as they are disclosed). This stuff fuels my privacy concerns.

Exhibit 6: "Family finds hidden camera livestreaming from their Airbnb in Ireland I won't trust Airbnb for stay! It would be my LAST choice until they 'certify' themselves that the properties are safe from privacy perspective. #airbnb #failure #unsafe"

In summary, Airbnb guests tend to prefer stays where they feel comfortable and have access to basic amenities and facilities of decent quality. Guests also tend to associate these materials with the feeling of being at home. The homey feeling is another factor that most Airbnb users tend to consider while choosing an accommodation. However, Airbnb consumers prefer places where the owner does not live next door. In addition, tweets about hidden cameras and security demonstrate their concern about the lack of privacy and would require policy makers to strengthen current regulations to provide consumers with a level of confidence in their Airbnb stay.

#### 4.6 Pet-friendly environment

Another significant factor that emerged from this study is that users will experience a better Airbnb stay if there are animals (pets) at the host's place, as mentioned in Cheng and Jin (2019) [11]. Tweets related to animals are found to be significantly higher in Europe, followed by North America, Asia and Africa. South America and Oceania yield no tweets mentioning animals. Guests commonly tweet about the friendliness of animals (cuddles, greeting), whose presence creates a general positive experience for the guests [42]. It is also important to note that pet tourism is one of the distinctions between an Airbnb and a traditional accommodation. Most hotels are not animal-friendly and would not allow guests to keep animals. Our study found that some guests look for animal-friendly Airbnb homes in order to bring their pets along with them. Usage of hashtags such as "dogs" and "cats" (#dog, #cat, #dogfriendly, #airbnb dog) are high in these Airbnb tweets. Below are some quotes which exemplify our findings:

Exhibit 1: "Last picture with molly the Airbnb cat this morning she loved cuddles #BlackCatsOfInstagram #airbnb"

Exhibit 2: "Once again stunning photography #comfortcottagehealing #visitwales #dogfriendly #TheDogsWithMe"

Exhibit 3: "Very tranquil #comfortcottagehealing #visitwales #dogfriendly #TheDogsWithMe #alpacos #ArtsWales #SunDogs #Airbnb #yell"

In conclusion, a pet-friendly environment is an emerging factor associated with Airbnb consumers' selection, as consumers tend to find homes with animals to enrich the overall experience of their stay.

## 5. Conclusion

This study provides and identifies the important factors associated with consumer choice of an Airbnb accommodation. Data collected and analyzed qualitatively from Twitter Archiver revealed six themes: price and status, social interaction and communication, location, reputation, amenities and a pet-friendly environment.

The findings demonstrate the important factors which Airbnb hosts might need to consider improving their services to gain a competitive advantage over other hosts. Apart from negligible concerns such as noise in the neighborhood, worries such as hidden cameras in Airbnb homes and biased review systems also came to light in our study. Future studies may focus on these concerns by considering and comparing different users and reviews platforms.

This study contributes to literature by providing a more thorough understanding of Airbnb users and their experiences through tweets. This understanding can be helpful to the hospitality and tourism industry to further strategize product offerings to cater to different targeted users, such as travelers with pets.

Future research can also be conducted to further define the current Airbnb online recommendation system based on the additional factors revealed in this study. Through our findings, users tend to compare Airbnb accommodations to hotels which provide more comprehensive services. In future studies, there is a need to observe why they do so to gain deeper insights from various perspectives. Future research can look into establishing an integrated e-commerce platform linking Airbnb accommodations to various essential services, such as veterinary and family clinics or local food markets, to further facilitate the Airbnb community.

## References

- [1] Saggi, M.K. and S. Jain, A survey towards an integration of big data analytics to big insights for value-creation. *Information Processing & Management*, 2018. 54(5): p. 758-790.
- [2] Brandt, T., J. Bendler, and D. Neumann, Social media analytics and value creation in urban smart tourism ecosystems. *Information & Management*, 2017. 54(6): p. 703-713.
- [3] Del Vecchio, P., et al., Creating value from social big data: Implications for smart tourism destinations. *Information Processing & Management*, 2018. 54(5): p. 847-860.
- [4] Gu, Y., Z.S. Qian, and F. Chen, From Twitter to detector: Real-time traffic incident detection using social media data. *Transportation research part C: emerging technologies*, 2016. 67: p. 321-342.
- [5] Mohammad, S.M., et al., Sentiment, emotion, purpose, and style in electoral tweets. *Information Processing & Management*, 2015. 51(4): p. 480-499.
- [6] Petrucci, M.A., et al., Airbnb and neighbourhoods: an exploratory study. *International Journal of Tourism Cities*, 2020.
- [7] Airbnb. Vacation Rentals, Homes, Experiences & Places. 2019; Available from: [www.airbnb.com/](http://www.airbnb.com/).
- [8] Quattrone, G., et al. Who benefits from the "Sharing" economy of Airbnb? in *Proceedings of the 25th international conference on world wide web*. 2016.

- [9] Tussyadiah, I.P. and F. Zach, Identifying salient attributes of peer-to-peer accommodation experience. *Journal of Travel & Tourism Marketing*, 2017. 34(5): p. 636-652.
- [10] Brochado, A., M. Troilo, and S. Aditya, Airbnb customer experience: evidence of convergence across three countries. *Annals of Tourism Research*, 2017. 63: p. 210-212.
- [11] Cheng, M. and X. Jin, What do Airbnb users care about? An analysis of online review comments. *International Journal of Hospitality Management*, 2019. 76: p. 58-70.
- [12] Han, H., C. Koo, and N. Chung, Implication of the fit between Airbnb and host characteristics: a trust-transfer perspective. in *Proceedings of the 18th Annual International Conference on Electronic Commerce: e-Commerce in Smart connected World*. 2016.
- [13] Kakar, V., et al., The visible host: Does race guide Airbnb rental rates in San Francisco? *Journal of Housing Economics*, 2018. 40: p. 25-40.
- [14] Lyu, J., M. Li, and R. Law, Experiencing P2P accommodations: Anecdotes from Chinese customers. *International Journal of Hospitality Management*, 2019. 77: p. 323-332.
- [15] Mauri, A.G., et al., Humanize your business. The role of personal reputation in the sharing economy. *International Journal of Hospitality Management*, 2018. 73: p. 36-43.
- [16] O'Regan, M. and J. Choe, Airbnb and cultural capitalism: Enclosure and control within the sharing economy. *Anatolia*, 2017. 28(2): p. 163-172.
- [17] Sthapit, E. and J. Jiménez-Barreto, Exploring tourists' memorable hospitality experiences: An Airbnb perspective. *Tourism Management Perspectives*, 2018. 28: p. 83-92.
- [18] Cheng, M. and G. Zhang, When Western hosts meet Eastern guests: Airbnb hosts' experience with Chinese outbound tourists. *Annals of Tourism Research*, 2019. 75: p. 288-303.
- [19] Liang, L.J., H.S.C. Choi, and M. Joppe, Understanding repurchase intention of Airbnb consumers: perceived authenticity, electronic word-of-mouth, and price sensitivity. *Journal of Travel & Tourism Marketing*, 2018. 35(1): p. 73-89.
- [20] Abdar, M. and N.Y. Yen, Analysis of user preference and expectation on shared economy platform: An examination of correlation between points of interest on Airbnb. *Computers in Human Behavior*, 2020. 107: p. 105730.
- [21] Khoo, F.S., P.L. Teh, and P.B. Ooi, Consistency of online consumers' perceptions of posted comments: An analysis of TripAdvisor reviews. *Journal of ICT*, 2017. 16(2): p. 374-393.
- [22] Hookway, N., Entering the blogosphere: some strategies for using blogs in social research. *Qualitative research*, 2008. 8(1): p. 91-113.
- [23] Guttentag, D., Progress on Airbnb: a literature review. *Journal of Hospitality and Tourism Technology*, 2019.
- [24] Qin, D., et al., The future of Airbnb in China: industry perspective from hospitality leaders. *Tourism Review*, 2020.
- [25] Chica-Olmo, J., J.G. González-Morales, and J.L. Zafra-Gómez, Effects of location on Airbnb apartment pricing in Málaga. *Tourism Management*, 2020. 77: p. 103981.
- [26] Guo, L., et al., A Novel Airbnb Matching Scheme in Shared Economy Using Confidence and Prediction Uncertainty Analysis. *IEEE Access*, 2018. 6: p. 10320-10331.
- [27] Chang, W.-L. and J.-Y. Wang, Mine is yours? Using sentiment analysis to explore the degree of risk in the sharing economy. *Electronic Commerce Research and Applications*, 2018. 28: p. 141-158.
- [28] Lutz, C. and G. Newlands, Consumer segmentation within the sharing economy: The case of Airbnb. *Journal of Business Research*, 2018. 88: p. 187-196.
- [29] Davidson, A., M.R. Habibi, and M. Laroche, Materialism and the sharing economy: A cross-cultural study of American and Indian consumers. *Journal of Business Research*, 2018. 82: p. 364-372.
- [30] So, K.K.F., H. Oh, and S. Min, Motivations and constraints of Airbnb consumers: Findings from a mixed-methods approach. *Tourism Management*, 2018. 67: p. 224-236.
- [31] Wang, D. and J.L. Nicolau, Price determinants of sharing economy based accommodation rental: A study of listings from 33 cities on Airbnb. *International Journal of Hospitality Management*, 2017. 62: p. 120-131.
- [32] Abdar, M., K.-H. Lai, and N.Y. Yen, Crowd Preference Mining and Analysis Based on Regional Characteristics on Airbnb. in *2017 3rd IEEE International Conference on Cybernetics (CYBCONF)*. 2017. IEEE.
- [33] Liu, S.Q. and A.S. Mattila, Airbnb: Online targeted advertising, sense of power, and consumer decisions. *International Journal of Hospitality Management*, 2017. 60: p. 33-41.
- [34] Ert, E., A. Fleischer, and N. Magen, Trust and reputation in the sharing economy: The role of personal photos in Airbnb. *Tourism management*, 2016. 55: p. 62-73.
- [35] Zekanovic-Korona, L. and J. Grzunov, Evaluation of shared digital economy adoption: Case of Airbnb. in *2014 37th International Convention on Information and Communication Technology, Electronics and Microelectronics (MIPRO)*. 2014. IEEE.
- [36] Dogru, T. and O. Pekin, What do guests value most in Airbnb accommodations? An application of the hedonic pricing approach. 2017.
- [37] Liang, S., et al., Be a "Superhost": The importance of badge systems for peer-to-peer rental accommodations. *Tourism management*, 2017. 60: p. 454-465.
- [38] Teubner, T., F. Hawlitschek, and D. Dann, Price determinants on AirBnB: How reputation pays off in the sharing economy. *Journal of Self-Governance & Management Economics*, 2017. 5(4).
- [39] Qin, K.F.P. and Fan, Airbnb and local culture. 2020.
- [40] Piracha, A., et al., Racism in the sharing economy: Regulatory challenges in a neo-liberal cyber world. *Geoforum*, 2019. 98: p. 144-152.
- [41] Teh, P.-L., L.P. Huah, and Y.-W. Si, The intention to share and re-shared among the young adults towards a posting at social networking sites, in *New Perspectives in Information Systems and Technologies*, Volume 1. 2014, Springer. p. 13-21.
- [42] Peng, N., A. Chen, and K.-P. Hung, Including pets when undertaking tourism activities: incorporating pet attachment into the TPB model. *Tourism Analysis*, 2014. 19(1): p. 69-84.
- [43] Kirillova, K., S. Lee, and X. Lehto, Willingness to travel with pets: a US consumer perspective. *Journal of Quality Assurance in Hospitality & Tourism*, 2015. 16(1): p. 24-44.
- [44] Carr, N. and S. Cohen, Holidaying with the family pet: No dogs allowed! *Tourism and Hospitality Research*, 2009. 9(4): p. 290-304.
- [45] Chen, C.-C. and Y.-C. Chang, What drives purchase intention on Airbnb? Perspectives of consumer reviews, information quality, and media richness. *Telematics and Informatics*, 2018. 35(5): p. 1512-1523.
- [46] Van Manen, M., Researching lived experience: Human science for an action sensitive pedagogy. 2016: Routledge.
- [47] Kozinets, R., Netnography: Doing Ethnographic Research Online. 2010.
- [48] Lange, G. Why African Countries Are Restricting Airbnb's Rise in the Continent. 2018; Available from: [theculturetrip.com/africa/namibia/articles/african-countries-restricting-airbnbs-rise-continent/](http://theculturetrip.com/africa/namibia/articles/african-countries-restricting-airbnbs-rise-continent/).
- [49] Zervas, G., D. Proserpio, and J.W. Byers, The Rise of the Sharing Economy: Estimating the Impact of Airbnb on the Hotel Industry. *Journal of Marketing Research*, 2017. 54(5): p. 687-705.