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THE SEVEN LIVES OF AIRBNB. THE ROLE OF ACCOMMODATION TYPES.

Abstract

This paper investigates how the pandemic is impacting different accommodation types, and whether travellers’ choices regarding accommodation type are affected by the need for physical distance. Study 1 shows that travellers are reluctant to book shared flats on Airbnb during the pandemic. However, full flats – controlling for price levels - are preferred to hotel rooms. Study 2 clarifies the process behind the increased choice for full flats, i.e., the need for physical distance. In Study 3, we manipulate physical distance and show that assuring physical distance will reduce the concerns towards hotel and shared flat options. Apart from enlightening the psychological process behind accommodation choice, the study offers operators actionable suggestions on how to maximise bookings despite the pandemic.

Keywords: need for physical distance; peer-to-peer; accommodation; Airbnb; experiments.
Introduction

The global pandemic has posed a serious threat to the global economy, the tourism and hospitality sector in general (Sharma & Nicolau, 2020), and to paid peer-to-peer accommodation types specifically (Dolnicar & Zare, 2020). Peer-to-peer models have grown exponentially in recent years (Ert, Fleischer & Magen, 2016; Gutiérrez, García-Palomares, Romanillos & Salas-Olmedo, 2017; Viglia, 2020), mainly due to rapid technological developments (see Buhalís et al., 2019). Over time, paid peer-to-peer models like Airbnb have threatened traditional hotels by stealing market shares, proposing new ways to access services and focussing on unique experience, social/physical interactions and lower prices (Tussyadiah & Pesonen, 2016, 2018). In line with this, a growing body of literature has recently discussed the differences between paid peer-to-peer versus traditional models (i.e., Heo, 2016; Osman, D’Acunto & Johns, 2019), along with the elements that travellers look for when choosing one model over another (Hajibaba & Dolnicar, 2017). Additionally, some systematic reviews on the state of current research (see Dolnicar, 2019; Prayag & Ozanne, 2018; Sainaghi, 2020; Sainaghi & Baggio, 2020) show substitution effects between these two realms.

Traditional models (e.g., hotels) are characterized by strong institutional settings (Osman et al., 2019), while in the case of paid peer-to-peer accommodation there is a lower social/physical distance and higher trust between guests and hosts (Ert & Fleischer, 2019; Pera, Viglia, Grazzini & Dalli, 2019). Hence, traditionally, travellers who choose a paid peer-to-peer model seek meaningful social/physical interactions with locals, unique experiences and lower prices (Tussyadiah & Pesonen, 2016). As argued by Dolnicar (2019, pp. 248–249), ‘a unique feature of paid online peer-to-peer accommodation is the wide range of different kinds of spaces being offered’ and ‘sometimes the human relationship rather than a house is… the primary shared asset’. To the best of our knowledge, only one study has explored empirically different types of paid peer-to-peer options, such as shared rooms, private rooms and entire homes (Tussyadiah, 2016). In particular, the author found that the pursuit of social benefits is associated more with the choice of shared flat than full flat. Nevertheless, as anticipated, the COVID-19 pandemic has changed the status quo of the sector, imposing new dynamics regarding the structures of accommodations, on the one hand, and the choices, needs, necessities and uses of travellers, on the other (Gössling, Scott & Hall, 2020). Consistently, Dolnicar and Zare (2020) have recently proposed that COVID-19 will disrupt the paid peer-to-peer accommodation type, and recent data show that paid peer-to-peer services have witnessed a dramatic drop in business volumes during the lockdown (Glusac, 2020). Moreover, given the economic crisis and the continued social/physical distancing applied in many countries around the world, these business models will likely continue to suffer for many months. Brian Chesky, Airbnb's chief executive, declared: ‘Airbnb's business has been hit hard, with revenue this year forecasted to be less than half of what we earned in 2019’. Nonetheless, Airbnb will now be listed in the stock market this year, which shows that its future is far from over (Driebusch, Farrell, & Lombardo, 2020).

In this paper, we propose and hypothesize that the paid peer-to-peer accommodation type is not dead but that there will be a change in bookings in favour of full flats rather than shared flats. In other terms, the pandemic reduces tourists’ expectations and the search for the social/physical interaction typical of peer-to-peer models (Osman et al., 2019; Pera et al., 2019) and hotel main receptions and common spaces, such as bars or lounges. Along these lines, the pandemic favours types of accommodations that guarantee physical distance, such as full flats. Accordingly, we also hypothesize - and find evidence for it - that the increased choice for full flats is driven by the need for physical distance.

Physical distancing asks for fast changes in the social habits of citizens (Pfattheicher, Nockur, and Bohm, 2020), so the physical aspect can be seen as the driving social habits change due to the
pandemic. We use the composed term “social/physical” throughout the paper to reflect the physical part of social interactions (vs. social/technology-mediated interactions). In the past, social and physical interactions have been regarded mainly as synonymous/interchangeable, with the second being the main vehicle for the first (conviviality is a clear example). In the digital age (as exemplified by travellers’ blogs or online communities), we feel it important to specify what we refer to.

The scientific community has found and communicated that COVID-19 can occur in specific settings, particularly indoor, where infected person(s) spend long periods of time with others (World Health Organization; https://www.who.int). A lingering question for the International health authorities and policy makers has therefore become “how to reduce virus spread while limiting also the negative socio-economic impact”. Physical distancing, that is minimizing one’s contacts with others, has been proposed as one of the useful measures. Depending on the specific geographical context and on the timing, physical distancing has been induced through mandatory regulations (such as lockdown) and/or encouraged as voluntary practice by calling upon each citizen self-responsibility.

Measures such as physical distancing ask for fast changes in core social habits of citizens (Pfattheicher, Nockur, and Bohm, 2020). Minimizing contacts between people may lead to benefits that are both egoistic in nature (namely, protecting oneself) and altruistic or social (as protecting others). At the same time, they entail personal costs. The presence of physical distance, indeed, inhibits also social/physical interaction. Given these arguments, we portray that need for physical distance is a key factor driving changes in each one’s behaviour, including tourists’ consumption patterns.

Methodologically, the paper proposes, in line with previous studies (Pera et al., 2019; Tassiello, Viglia & Mattila, 2018), three experiments to test the choice of the type of accommodation (full flat, shared flat, and hotel) across two different scenarios (non-pandemic versus pandemic one).

We test how these choices are mediated by the need for physical distance. We also actively manipulate physical distance to see whether a change in the level of this variable is able to influence accommodation choice. As far as we know, it is the first time that a tourism paper proposes a manipulation of a mediator in experimental designs (see Jacoby and Sassenberg, 2011). Using a manipulation of a mediator is important because it allows assessing whether it is possible to actively affect a process that induces certain behaviours (e.g., the choice of an accommodation). The empirical research finds that: a) controlling for price levels, full flats gained popularity during the pandemic crisis compared to hotels and shared flats; b) one person’s need for physical distance represents the underlying mechanism behind the enhanced choice for full flats on Airbnb during the pandemic; c) the need for physical distance contributes to explaining the relationship between the pandemic situation and the accommodation type chosen, such that the ability of guaranteeing physical distance increases the preference for shared rooms and hotels.

The paper provides two clear implications for theory. First, the paper contributes to the literature on paid peer-to-peer accommodation types (e.g., Dolnicar, 2020; Dolnicar & Talebi, 2020; Ert & Fleischer, 2020; Guttentag et al., 2018), suggesting that this model is not dead but rather will undergo a major change. Specifically, the paper adds to the literature on social/physical distance in the accommodation realm (Osman et al., 2019; Pera et al., 2019), highlighting that, due to the COVID-19 pandemic, travellers will increasingly choose the full flat model. Second, drawing from spatial distance theory (Williams & Bargh, 2008), this paper has proposed – and found evidence for – the need for physical distance (Pfattheicher, Nockur, and Bohm, 2020) as an important underlying mechanism. We expect that the need for physical distance will affect travellers and influence their decisions and behaviours in the coming months and years, due to the COVID-19 pandemic.
From a managerial perspective, the study encourages to: a) list entire homes instead of splitting them into different listings; and b) put emphasis on, and include in communication, all the measures and practices to increase physical distance between strangers such as differentiated pathways. Overall, the paper sheds light on the emotional and behavioural responses of tourists to the changes imposed by the Covid-19 pandemic.

**Theoretical background**

The sharing economy has attracted growing interest among scholars and practitioners in the last two decades and seems to receive even more attention recently (Dolnicar, 2020). Having revolutionized habits, relationships and business models, this rising phenomenon led researchers from different fields to pose new research questions (Eckhardt et al., 2019). It also permeated the boundaries of the tourism and hospitality sectors (Ert et al., 2016; Fang, Ye & Law, 2016), crafting new ways for consuming services together, with new disruptive business models such as paid peer-to-peer ones (Dolnicar & Talebi, 2020).

Paid peer-to-peer accommodation has been analyzed with distinct theoretical backgrounds and various methodologies, giving rise to an increasing number of academic papers on a broad range of topics (see Belarmino & Koh, 2020; Dolnicar, 2019; Sainaghi, 2020; Sainaghi & Baggio, 2020). Conceptual studies have focused on the nature of sharing in the hospitality and tourism sectors (for example, Kannisto, 2017), since ‘the P2P accommodation segment has several aspects which make it unique, even in the realm of the sharing economy’ (Belardino & Koh, 2020, p. 1).

Overall, studies indicate that in traditional models such hotels there are strong institutional settings (Osman et al., 2019). Contrarily, paid peer-to-peer models present a lower social/physical distance between guests and hosts (Pera et al., 2019).

Studies focused on guests and on host-guest relationships account for a high share of available literature on peer-to-peer accommodation platforms (Belarmino & Koh, 2020; Sainaghi & Baggio, 2020). A rich stream of studies investigated the characteristics of paid peer-to-peer accommodations, together with the factors that lead tourists to choose this type of model instead of traditional models. For example, Quinby and Gasdia (2014) suggested that lower prices and more physical space in the apartment/house are the main reasons for choosing paid peer-to-peer accommodations instead of hotels. Similarly, Balck and Cracau (2015) confirmed the key role of cost reduction in the choice of accommodation type. In addition to the two previous studies, Tussyadiah and Pesonen (2016) found that travellers seek meaningful social/physical interactions with locals, unique experiences and lower prices when choosing a paid peer-to-peer model. When contrasting paid peer-to-peer accommodation to traditional models, the former seems to raise concerns about the safety. For example, Hajibaba and Dolnicar (2017) found that safety was the main perceived worry preventing respondents from booking on peer-to-peer websites in the Australian context. Birinci, Berezina and Cobanoglu (2018), in a cross-sectional online survey done in the United States, discovered that the safety and security risk was important as a satisfaction predictor only in the Airbnb sample.

These findings seem to point to the opportunity to look at peer-to-peer accommodation types not as a homogeneous category to be contrasted with traditional accommodation types. Indeed, to the best of our knowledge, only Tussyadiah (2016) has empirically investigated guests’ cognitive and behavioural intentions with respect to different types of paid peer-to-peer accommodation. The most interesting result, in this respect, is that the search for social benefits is associated more with the choice of shared flat than full flat.
Recently, studies on the sharing economy have focused on the negative impacts of COVID-19 (Farzanegan, Gholipour, Feizi, Nunkoo & Andargoli, 2020). For example, Farmaki and colleagues have found that the pandemic’s effects have been equally great on peer-to-peer accommodation as on mainstream hospitality players. More interestingly, they found that while some hosts rent through peer to peer platforms, as they feel optimistic about the future. Others decided to exit the platform to turn to long-term renting (Farmaki, Miguel, Drotarova, Aleksić, Časni, & Efthymiadou, 2020). Despite this, there is a dearth of studies focusing on guests. In this regard, a lingering question is whether COVID-19 affects tourists’ needs and, particularly, their motivations, preferences, perceptions and behaviour regarding accommodation choices and need for social/physical distance (De Vos, 2020). Safety risk perception, especially as far as personal health is concerned, is now altered by the worldwide sequence of events. The COVID-19 pandemic might have induced a higher need for personal ‘physical’ distance, especially with non-relatives. This tendency might translate into a reduced quest for, or sensitivity to, social interaction/experience and to the related low levels of required social/physical distance that were found to characterize some segments of peer-to-peer accommodation customers (Tussyadiah, 2016). In other words, social/physical distance might continue to be a motivating factor for choosing peer-to-peer accommodation, but with a different meaning and possibly a reversed effect. Specifically, the relevance of physical space while choosing accommodation might change.

Altogether, a sharpened safety risk perception might increase the need for physical distance to avoid infection – and this might affect accommodation choices.

Table 1 offers an illustration of papers dealing with the above aspects. The selection revolves around two criteria: i) studies exploring different types of accommodation (comparing hotels vs. peer-to-peer, but also considering different types within peer-to-peer); and ii) studies investigating the effects of social/physical distance in peer-to-peer models and/or traditional models. The last row of the table presents the proposed contribution of our paper. The next paragraph elaborates on the expected contextual effects of COVID-19 before developing the hypotheses.

As can be seen in Table 1, the literature has often neglected the type of accommodation (full flat versus shared flat) when analysing the paid peer-to-peer accommodation type. This represents a key aspect after COVID-19. Traditionally, paid peer-to-peer models are classified into three broad groups (Gyödi, 2019): shared rooms, private rooms and entire homes. A shared room generally means that the traveller sleeps in a common space. A private room usually indicates that the traveller is entitled to use a single room in a flat or house. Finally, an entire home generally implies that the traveller has exclusive use of the whole property. COVID-19 and the social/physical distancing requirements are imposing constraints on the first two groups because a portion of travellers are afraid of sharing a house or room with strangers. Therefore, the structure of accommodations (shared house vs. full house) together with the ‘negative side’ of social/physical interaction and an increasing fear of contagion may dramatically alter the demand for paid peer-to-peer accommodations after COVID-19.

Hypotheses development

A traveller chooses a shared flat when she/he wants to save money and enjoy a shared experience with another individual as a means of experiencing social/physical interactions (Yannopoulou et al.,
behind the enhanced infection risk (Chien Kenrick, 2013), which are highly influenced by disease choices, and thus it will influence tourists’ preferences and choices when deciding the type of accommodation.

It should be noted that also traditional accommodation types, such as hotels, are characterized by institutional settings that require contact with staff and indirect contact with other travellers in the hotel (Osman et al., 2019). By contrast, the type of full flat/house renting of peer-to-peer accommodation types often requires no interaction with others, and allows for full social/physical distancing from other individuals, especially if it is an isolated structure. Therefore, it is reasonable to assume that in a pandemic scenario the full flat model will be widely used by travellers, and will be preferred to traditional models and shared flats.

\textit{Hypothesis 1:} Compared to a non-pandemic situation, in a pandemic situation travellers tend to choose a full flat accommodation over hotels and shared flats.

COVID-19 represents an economic and social shock (Gössling et al., 2020) that, through the imposed lockdown and social/physical distancing, will affect the tourism and hospitality sector from both the business model and customer behaviour standpoints. From a psychological point of view, research indicates that the current pandemic can constitute a paradigm shift in tourists’ behaviour and decision-making (Kock, Nørfelt, Josiassen, Assaf & Tsonias, 2020). Previous research has found that quarantine measures have negative short- and long-term psychological effects, including anxiety and post-traumatic stress, with even more severe effects for longer quarantines (Brooks et al., 2020).

Previous studies have highlighted the behaviour of travellers with regard to risk of contagion and fear of infectious diseases (e.g., Jonas, Mansfeld, Paz & Potasman, 2011) and how these affect their choices in tourist accommodation, suggesting that travellers display self-protecting behaviours when threatened by external factors (Cahyanto, Pennington-Gray, Thapa, Srinivasan, Villegas, Matyas, & Kiousis, 2016). As a consequence, people will increasingly look for individual social/physical distancing. The latter phenomena can be viewed as the desire to avoid unnecessary contact and proximity. An entire stream of psychological theories focuses on the effects of different levels of physical distance – the so-called spatial distance theory (Williams & Bargh, 2008). This has been also investigated by the literature on tourist xenophobia, which has been defined as ‘a tourist’s perceptual discomfort and anxiety associated with people encountered at a destination’ (Kock et al., 2020, p. 6). We expect this to be accrued by the fear of being infected and infecting others (Brooks et al., 2020). In fact, fear of contagion has been proposed as the human brain’s response to external stimuli (Schimmenti et al., 2020), which influences our behaviours and choices, and thus it will have an impact on travel decisions from now on. Past studies have investigated the perceived health risks related to travels, and how these affect tourists’ decisions, which are highly influenced by disease-avoiding behaviour (Jonas et al., 2011; Griskevicius & Kenrick, 2013). Other studies have assessed how tourists behave in trying to limit infection risk (Chien, Sharifpour, Ritchie & Watson, 2017). In a pandemic scenario where scientists showed how infection risks are related to the physical proximity with other persons, need for physical distance might influence tourists’ preferences and choices when deciding the type of accommodation.

Based on the above theorizing, we propose need for physical distance as the underlying mechanism behind the enhanced choice of full flats on Airbnb during a pandemic.
Hp. 2. Need for physical distance mediates the relationship between the pandemic situation (or not) and the choice of different accommodation types, such that the higher the need for physical distance the greater the likelihood of choosing a full flat option.

Hosts operating in peer-to-peer platforms and hotel operators need to offer a strategic response to users’ new needs (Farmaki et al., 2020). Spatial distance theory (Williams & Bargh, 2008) portrays that physical distance is able to affect choice. If the need for physical distance is an important variable behind the main pandemic-accommodation choice relationship, actively manipulating physical distance should have an impact on the accommodation choice. Specifically, reducing the need for physical distance by providing reassuring guidelines that guarantee physical distance will reduce the concerns towards booking hotels and shared flats even in a pandemic scenario.

Hp. 3. Manipulating physical distance perceptions would alter the relationship between the pandemic situation (or not) and the choice of different accommodation types, such that when physical distance is reduced travellers will reduce their avoidance to hotels and shared flats.
Overview of the Studies and Conceptual Model

Based on the aforementioned literature, Figure 1 presents our conceptual model.

[Figure 1 near here]

The research employs three complementary laboratory experiments. This methodological approach is getting more popularity in tourism and hospitality (Fang et al., 2020; Huang, Liu, Kandampully & Bujisic, 2020). Study 1 investigates whether the presence of the pandemic (or not) influences the type of accommodation chosen, namely a private room in a shared flat [shared flat] vs. in a hotel [hotel] vs. a full flat [full flat], controlling for the price (H1). Study 2 examines whether the need for physical distance mediates this main relationship (H2), while study 3 tests whether actively manipulating physical distance affects the choice odds towards hotel and shared room (H3). As discussed by Viglia and Dolnicar (2020), a multi-stage complementary experimental research design is essential for probing the theory and establishing external validity of the results. All the three studies have been set up as laboratory experiments. Contrarily to online experiments, this research design presents two main advantages: high internal validity and full control for researchers (Pera et al., 2019). Moreover, laboratory experiments are particularly useful for the identification of psychological processes causing changes in the dependent variable (Hwang & Mattila, 2018).

Study 1

Method

The purpose of Study 1 is to examine travellers’ accommodation choice (shared flat in Airbnb vs. hotel vs. full flat in Airbnb) in two different scenarios, namely pandemic situation or not. Hence, the aim of this study is to test H1. Study 1 is a laboratory study run in October 2020 in a large European university, with a sample of participants from different nationalities. We specifically required prior booking experience as a screening question. This stratified sample includes students and workers, both freelance professionals and employees.

As the goal of the first experiment is to investigate the choice among three different accommodation types depending on the pandemic situation, we made use of three fictitious Airbnb and Booking.com listings based on Pera et al. (2019). To control for the price of the different offerings, we have taken the average prices for the three options from Statista (Statista, 2020 – www.statista.com). Specifically, the price for the shared flat was £ 53 whereas the price for the hotel and the full flat was £ 117. We used comparable offers in terms of number of guests, services and location, as shown in Figure 2. We told participants they were going to visit the location (London) alone. To avoid any confounding effect, the listings did not contain any other additional information.

[Figure 2 near here]

The independent variable consisted of two different levels (0=non-pandemic; 1=pandemic). Using a between-subject design, participants were asked to think of the pre (vs. during) pandemic times. Afterwards, all participants were shown 3 accommodation choices and they were asked to pick one. Since all the data were collected in October, we asked participants to think of the times before (vs. now during) the pandemic and then they were led to think about their accommodation choice, based on three different offerings: shared flat on Airbnb (-1), hotel on Booking.com (0), and full flat on Airbnb (1). Enhanced behavioural realism (Morales et al., 2017; Viglia & Dolnicar, 2020) was used
in the dependent variable by giving 10 Booking/Airbnb vouchers of the value of €50 based on their Booking/Airbnb preference. Additionally, we collected some demographic data (age and gender) and the nationality of participants (60% of British participants) to control for potential cultural effects. Finally, we included an attention check, i.e., “will the travel take place during the pandemic?”, to see whether participants remembered the situation they were assigned to (pandemic or not).

Results

A total of 134 people participated in the experiment. Of these, 59% were males. In terms of age, 34.3% of the participants were 18–24 years old, 48.5% were 25–34, 11.9% were 35–44, and 5.2% were in 45–54 age group. The attention check worked as designed, i.e., participants correctly identified the condition they were assigned to (pandemic or not).

We performed a chi-square test of independence in SPSS 27 to examine the relation between the pandemic (or not) scenario and the type of accommodation (shared flat vs. hotel vs. full flat). The relation between these variables is significant, \(X^2 (1, n = 134) = 37.04, p = .001\). Specifically, at their respective average prices (£53 for the shared flat and £117 for the hotel and the full flat), the majority of the respondents preferred shared flat (48.6%) to hotel (33.8%) and full flat (17.6%) in a non-pandemic situation. However, in the pandemic condition the choices were completely flipped, favouring the full flat (65.1%), to hotel (25.8%) and shared flat (9.1%).

The results of Study 1 indicate that, compared with the non-pandemic situation, in a pandemic situation travellers tend to choose a full flat over a hotel and a shared flat accommodation, thus supporting H1. We do not find any significant results with regard to our demographic variables (age, gender) and cultural variable (i.e., nationality), with the latter that was excluded from the analysis for the sake of parsimony.

Study 2

Study 1 established the preference of tourists for full flats on peer-to-peer platforms (Airbnb) over hotels and shared flats during a pandemic situation. Study 2 investigates whether the personal need for physical distance is the mechanism behind the relationship between a pandemic scenario (or not) and the choice of one of the three accommodation types. This new study tests whether travellers’ need for physical distance mediates this relationship, and whether these results change based on the accommodation type. Hence, it tests H2.

Method

The experiment was run in November 2020, using a sample of people registered with the university lab of a South European University who had at least one booking experience on Airbnb or Booking.com. The rationale to run the experiment in a different lab with respect to Study 1 was to exclude the participants who took place to the first experiment to avoid confounding/learning effects. This stratified sample included students and workers, both freelance professionals and employees.

As for study 1, we included an attention check to measure whether participants recalled the type of scenario (pandemic or not) they were assigned to. The stimuli consisted of the same three types of accommodation advertisements used in Study 1 (Figure 2). We also gave 10 randomly selected participants a gift card of €50 for their chosen offering (Airbnb/Booking.com).
In addition to the variables used for Study 1, we included our hypothesized mediator ‘need for physical distance’. We measured it on a metric slider scale ranging from 1 = strongly disagree to 7 = strongly agree, involving three items. The items were taken from Pfattheicher et al. (2020), and state: “I won’t likely be at places where other people will also be”; “I won’t visit family members with whom I do not live together”; “I want to minimize close contact between people”. Therefore, higher self-report rates reflect higher personal need for physical distance (α= .72).

Given the multinomial nature of the dependent variable (3 choices), we conducted a multinomial logistic regression in STATA 13, with a mediation analysis to test for hypothesis 2. Specifically, a multinomial logistic regression approach allows estimating the probability of category membership on a dependent variable.

**Results**

A sample of 119 respondents participated in the study. In terms of gender, 68.1% of these were male while, considering age, 36.1% of the participants were 18–24 years old, 46.2% were 25–34, 13.4% were 35–44, 4.2% were in 45–54 age group.

Attention checks worked as designed, with participants correctly identifying their assigned (pandemic vs. non-pandemic) scenario (p < 0.01). As in study 1, the independent variable assumed the value of 0 in the case of a non-pandemic scenario, and the value of 1 in the case of a pandemic scenario. Hence, the coefficients capture the effect of the pandemic versus the non-pandemic situation.

Figure 3 illustrates the results. It also presents the simple mediation model for the personal need for physical distance’s effect on tourists’ choice of type of accommodation, in which the full flat is selected as a reference group. As in study 1, the coding for the options was -1 for shared flat, 0 for hotel, and 1 for full flat.

The second hypothesis, which postulates that the effect of the scenario situation (pandemic vs. not) on the choice of different accommodation types is mediated by the personal need for physical distance, is partially supported. The overall effect of the scenario (pandemic vs. non-pandemic) condition on choice of different accommodation types is significant (LR chi-squared = 19.22; Prob > chi-squared < 0.01). More precisely, the results show that being in a pandemic scenario (vs. a non-pandemic one) decreases the likelihood of choosing a shared flat (β=-1.403, p < 0.01; SE 0.481; 95% confidence interval [CI] = [-2.346, -0.460]) and a hotel room (β=-1.154, p < 0.05; SE 0.473; 95% CI = [-2.080, -0.227]) compared to the full flat (baseline). For the shared flat, there is also a significant effect of gender, with female showing to be less prone to choose it (β=-1.394, p < 0.05; SE 0.561; 95% CI = [-2.494, -0.295]).

To test for H2, we run a mediation model in STATA 13. Priming with a pandemic (vs. non-pandemic) condition increases the personal need for physical distance (β=1.013, p < 0.01; SE 0.280; 95% CI = [-0.459, 1.568]). Furthermore, the results show that the need for physical distance decreases the likelihood of choosing a shared flat (β=-0.514, p < 0.01; SE 0.163; 95% CI = [-0.833, -0.195]) and a hotel room (β=-0.395, p < 0.05; SE 0.157; 95% CI = [-0.702, -0.088]) compared to a full flat (baseline). For the shared flat option, it remains a significant effect of gender, with female
participants appearing as less willing to book it (β = -1.356, p < 0.05; SE 0.565; 95% CI = [-2.463, -0.248]).

Including the personal need for physical distance in the overall model shows high explanatory power (LR chi-squared = 26.59; Prob > chi-squared < 0.001). Need for physical distance has a negative and significant effect for the shared flat option (β = -0.416, p < 0.05; SE 0.168; 95% CI = [-0.746, -0.087]) and only marginally negative for the hotel option (β = -0.309, p < 0.10; SE 0.162; 95% CI = [-0.626, 0.008]). The effect of the scenario on the choice of different types of accommodation remains barely significant, suggesting a partial mediation (see, for instance, the coefficient for the hotel choice in Figure 3: β = -0.895, p < 0.1; SE 0.495; 95% CI = [-1.865, -0.075]).

Study 3

Study 2 has provided laboratory evidence of a relationship between the scenario (non-pandemic and pandemic), the personal need for physical distance, and the choice of the three accommodation types. Study 3 actively manipulates physical distance (i.e., manipulation of a mediator in experimental designs – see Jacoby and Sassenberg, 2011), to investigate whether it affects the strength of the relationship between the pandemic situation and the accommodation choice.

Method

The experiment was run in mid November 2020, using a stratified sample of people registered with a large university lab in a mid-scale European University, who had at least one booking experience on Airbnb or Booking.com. The rationale to run the experiment in a different lab with respect to Study 1 and Study 2 was to exclude the participants who took place to the first experiment to avoid confounding/learning effects.

The stimuli and procedure were exactly the same as the ones used in Study 1 and 2 to avoid the presence of confounding factors. Physical distance was manipulated in two levels as follows. For level 0, the description of the fictitious Airbnb and Booking.com listings was supplemented with the sentence “The access to the accommodation will not require any form of physical touchpoints with other people”, thus implying presence of physical distance. For level 1, the supplemental sentence to the description of the fictitious listings was “The access to the accommodation will require physical touchpoints with others”. We included a manipulation check to measure whether participants perceived that the physical distance was guaranteed (or not). We also gave 10 randomly selected participants a gift card of €50 for their chosen offering (Airbnb/Booking.com). Finally, we included an attention check to see whether participants remembered the situation they were assigned to (pandemic or not).

Results

A total of 137 respondents participated in the study. Female gender accounted for 54.7% of the sample. In terms of age, 10.9% of the participants were 18–24 years old, 58.4% were 25–34, 27.7% were 35–44, and 2.9% were in the 45–54 range. We first checked for the manipulation. Compared to the “non physical distance condition”, participants in the “physical distance condition” expressed significantly higher perception of physical distance (Mnondistance = 4.48, Mdistance = 2.93, p < 0.01).
Attention checks worked as designed, with participants correctly identifying their assigned (non-pandemic vs. pandemic) scenario ($p < 0.01$).

To test for hypothesis 3, given the multinomial nature of the dependent variable (3 options), we conducted a multinomial logistic regression in STATA 13.

Table 2 presents the main results for Study 3. The coding for the variables was consistent with our previous studies: the independent variable was coded as 0 for a non-pandemic scenario, and as 1 for a pandemic scenario; the dependent variable was coded -1 for shared flat, 0 for hotel room, and 1 for full flat.

While the main effect remains consistent to what found in Study 1, including the interaction term between the scenario (pandemic vs. non-pandemic) and physical distance shows how the new compounded variable eats up all the significance (for shared flat $\beta = -2.819, p < 0.01$; SE 1.059; 95%; CI = [-4.894, -0.743]; for hotel $\beta = -1.954, p < 0.05$; SE 0.900; 95% CI = [-3.719, -0.189]). In other words, the impact of the pandemic on the choice of the accommodation depends on the level of physical distance. As can be seen from the magnitude of the coefficients, the effect is amplified for shared flats, where tourists would clearly need even more assurance compared to hotels.

**Discussion and Conclusions**

This article hypothesizes and finds that - controlling for price - during the pandemic tourists are more inclined to book full flats compared to traditional hotel rooms and shared flats in Airbnb. Furthermore, the paper finds that need for physical distance (Pfattheicher, Nockur, and Bohm, 2020) plays a key role in lessening the concerns to book a hotel room or a shared flat, as can be seen by the manipulated mediation in Study 3.

The results provide two main theoretical implications. First, the paper contributes to the literature on paid peer-to-peer accommodation types (e.g., Dolnicar, 2020; Dolnicar & Talebi, 2020; Ert & Fleischer, 2020; Guttentag et al., 2018), suggesting that this model is not dead but rather will undergo a major change, which is in line with what Dolnicar and Zare (2020) recently proposed. Specifically, the paper adds to the literature on social/physical distance in the accommodation realm (Osman et al., 2019; Pera et al., 2019), highlighting that, due to the COVID-19 pandemic, travellers will increasingly choose the full flat model. This contrasts with the pre-pandemic literature, which suggests that travellers choose peer-to-peer to enjoy social/physical interaction and to live unique social experiences (Tussyadiah & Pesonen, 2016, 2018). Although there are studies on how COVID-19 is impacting peer-to-peer accommodation models, to the best of our knowledge this is the first study focusing on guests. For example, the study of Farmaki et al. (2020) focused on hosts, specifically exploring how COVID-19 is influencing hosts’ choices. Second, drawing from psychological theories, this paper has proposed – and found evidence for – the need for physical distance (Pfattheicher, Nockur, and Bohm, 2020) as an important underlying mechanism behind the enhanced choice for full flats on Airbnb during the pandemic. This offers an important contribution to the on-going experimental discourse to understand tourists’ responses to COVID-19 (see Nanni & Ulqinaku, 2020). We expect that the need for physical distance will affect travellers and influence their decisions and behaviours in the coming months and years, due to the COVID-19 pandemic. As a consequence, we find an important boundary condition to the work of Liu and
Mattila (2017), Tussyadiah and Pesonen (2016) and Yannopoulou et al. (2013) who emphasized the social/physical aspect of paid peer-to-peer models.

The paper offers some actionable implications for operators. First, entire homes are often split into several listings in peer-to-peer models (Horn and Merante, 2017). This leads to inefficiency because, in line with our results, travellers will not choose houses with several rooms rented to different people. Consequently, after COVID-19, we suggest hosts to list entire homes instead of splitting them into different listings. Second, the study shows how the need for physical distance can be actively manipulated. As a result, both peer-to-peer organizations (e.g., Airbnb) and hotels will need to adjust their communication strategies by highlighting guaranteed cleanliness and hygiene aspects, as well as emphasizing measures put in-place to assure physical distance. Indeed, in our experimental study 3, the variable physical distance proves to be effective in eating up the significance of the pandemic on the different travel choices. Based on our findings (study 2), women seem to be even more concerned to book a shared flat after the pandemic; thus they represent a priority target to be reassured. Third, hosts will need to rethink their business model to address how the shift from shared flat to full flat will impact their revenues and margins. This will have implications for pricing strategies and margins as, most likely, renting an entire house will generate lower revenues compared with renting several rooms separately. In addition, shared houses (with the host or other individuals) will have to be adapted to meet current regulations and, crucially, to ease the fear of the guests and to second their self-protecting tendency. In a pandemic period, in order to have social interaction and social/physical closeness continuing to motivate the choice of certain types of peer-to-peer accommodation, it might become important to transpose the human connection – that so far was mainly physical – to computer-mediated forms (e.g. connection with hosts in digital form only).

The paper presents some limitations that open up for a rich future agenda. While we have included behavioural realism in the dependent variable by giving a specific incentive (Booking/Airbnb voucher) based on participants’ choices, the studies were undertaken during the COVID-19 pandemic, and therefore it was impossible to organize a field study. Future studies might want to look at actual behaviour by collaborating directly with Booking.com and Airbnb. Trying to collaborate with operators directly has been proved difficult for their data policy sharing issues. This might change in the near future due to the pressure to openly share data. At the moment of writing, a promising signal in this sense is the European Commission’s announcement (European Commission, 2020 – March) to have reached a landmark data-sharing agreement with vacation and collaborative economy platforms (i.e., Airbnb, Booking.com, Expedia Group and Tripadvisor), which will allow the EU’s statistical office – Eurostat - to publish data on short-stay accommodations offered via these platforms. Additionally, it can be argued that full-flats, shared flats, and private hotel rooms serve different needs and people would self-select into these categories a priori. However, what we observe, with a sample of randomized participants, is a clear shift from a model to another (shared flats and hotel room vs. full flats), depending purely on the pandemic situation, i.e., controlling for average price levels and demographical/cultural variables. While results are robust to different European locations, hotel lobbies are rather different in the US and this might affect tourists’ perceptions toward hotels. Finally, the proposed model might appear naif and even obvious/trivial. Nevertheless, to the best of our knowledge, this is the very first study that measures the variation in the tourists’ accommodation choice due to the pandemic. A future avenue is introducing a price sensitivity analysis to figure out the necessary price variation that would rebalance accommodation choice.
References


Figure 1

Conceptual framework

Study 1: Effect of pandemic on accommodation type

Study 2: Mediation effect of need for physical distance

Study 3: Actively manipulating physical distance
Figure 2

Stimuli
Figure 3

The impact of different scenarios on tourists’ choice of a certain accommodation type and the mediating role of need for physical distance

Note. ref: reference category, *p = <0.1  **p = <0.05  ***p = <0.01
**Table 1**

*Why tourists chose different accommodation types (paid peer-to-peer vs. traditional hotels) and how they evaluate these models. Illustrative examples.*

<table>
<thead>
<tr>
<th>Authors, year</th>
<th>Research goal(s)</th>
<th>Methodology</th>
<th>Key Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quinby &amp; Gasdia, 2014</strong>&lt;br&gt;Share this! Private accommodation &amp; the rise of the new gen renter</td>
<td>Examining the US short-rental travellers: who they are, how they travel, what they want, and how they shop and book. The paper compares peer-to-peer accommodation vs. hotels</td>
<td>Survey (for the tourism research company Phocuswright)&lt;br&gt;United States&lt;br&gt;n.a.</td>
<td>Physical spaces in the apartment/house and prices are the main reasons for choosing peer-to-peer accommodations instead of hotels.</td>
</tr>
<tr>
<td><strong>Hajibaba &amp; Dolnicar, 2017</strong>&lt;br&gt;Substitutable by peer-to-peer accommodation networks?</td>
<td>To determine tourists’ perceived substitutability of established commercial accommodation with peer-to-peer accommodation in Australia</td>
<td>Online panel research&lt;br&gt;Australia&lt;br&gt;2016</td>
<td>Peer-to-peer networks are seen as a substitute for established commercial accommodation providers and tourists are very good at distinguishing between accommodation options and therefore have differentiated assessments of substitution effects for different kinds of commercial accommodation providers as well as staying with friends.&lt;br&gt;‘Safety’ emerges as the main perceived worry preventing respondents from booking on peer-to-peer websites.</td>
</tr>
<tr>
<td><strong>Birinci et al., 2018</strong>&lt;br&gt;Comparing customer perceptions of hotel and peer-to-peer accommodation advantages and disadvantages</td>
<td>To compare customer perceptions of hotel and peer-to-peer accommodation advantages and disadvantages and examine their influence on customer satisfaction and repurchase intentions</td>
<td>Cross-sectional online survey&lt;br&gt;United States&lt;br&gt;2018</td>
<td>Safety and security risk appear to be important as satisfaction predictors only in the Airbnb sample.</td>
</tr>
<tr>
<td>Authors, year</td>
<td>Title</td>
<td>Research goal(s)</td>
<td>Methodology</td>
</tr>
<tr>
<td>---------------</td>
<td>-------</td>
<td>------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Tussyadiah, 2016</td>
<td><strong>How tourists evaluate different paid peer-to-peer accommodation types</strong></td>
<td>Factors of satisfaction and intention to use peer-to-peer accommodation</td>
<td>Online survey United States 2015</td>
</tr>
<tr>
<td>Guttentag et al., 2018</td>
<td>Why tourists choose Airbnb: A motivation-based segmentation study</td>
<td>To investigate tourists’ motivations for using Airbnb accommodations (as they pertain to their particular characteristics) and to segment them accordingly</td>
<td>Online survey Country n.a. 2015</td>
</tr>
<tr>
<td>Osman et al., 2019</td>
<td>Home and away: Why do consumers shy away from reporting negative experiences in the peer-to-peer realms?</td>
<td>To explore the bias in consumer reviews (non-reporting of negative experiences) of peer-to-peer rented accommodation</td>
<td>Mixed method approach (quantitative exploratory analysis; qualitative exploratory investigation using in-depth interviews) Country n.a.</td>
</tr>
</tbody>
</table>
### Present research

<table>
<thead>
<tr>
<th>Understanding why peer-to-peer platforms present almost no negative reviews</th>
<th>Sequential transformative mixed-method approach (qualitative analysis through in-depth interviews; two laboratory experiments)</th>
<th>Peer-to-peer settings, even more than institutional ones, suffer from a consistent reviewing bias as ratings tend to be overwhelmingly positive, although online review users tend to value the negative ones more compared with positive ones. <strong>Social closeness hinders tourists’ willingness to provide negative online reviews to express their poor experiences. This bias is mediated by empathy between guests and hosts.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pera et al., 2019</td>
<td>Italy, Great Britain and Vietnam for the empirical analysis</td>
<td><strong>Social distance appears to have an influence on reporting bias. Consumers of peer-to-peer accommodation prefer not to engage in negative reporting if a bond with the host is developed (thus experiencing low social distance). The perception of ‘home’ decreases the social distance, which impacts the accuracy of the reviews.</strong></td>
</tr>
<tr>
<td>When empathy prevents negative reviewing behaviour</td>
<td>Italy for the lab experiment</td>
<td>Year n.a.</td>
</tr>
<tr>
<td>To understand the possible effects of the current COVID-19 pandemic on travellers’ choices of accommodation type (paid peer-to-peer vs. hotel). The work measures the choice of different types of paid peer-to-peer accommodation (full flat vs. shared flat) and the potential mediating role of need for physical distance.</td>
<td>Three experiments including behavioural realism in the dependent variable</td>
<td>After the COVID-19 pandemic, the choice of a paid full flat peer-to-peer accommodation is higher than the choice of a traditional hotel. However, the shared flat peer-to-peer model is the least preferred. <strong>Need for physical distance partially mediates the relationship between the pandemic situation and the preferred accommodation type.</strong></td>
</tr>
<tr>
<td>Three experiments including behavioural realism in the dependent variable</td>
<td>Europe</td>
<td>When actively manipulating physical distance, the detrimental effect of the pandemic on the choice of a hotel room and a shared flat (vs. a full flat in Airbnb) vanishes. <strong>The need for physical distance creates a barrier for the traditional social appeal of accommodation types. A possible solution is favouring a non-physical social interaction (i.e. inducing a sense of personal connection via</strong></td>
</tr>
<tr>
<td>2020 (during the COVID-19 pandemic)</td>
<td>2016</td>
<td>or by living in with the host and sharing life stories, a personal connection occurs; the guest is placed “here” or at home (Crouch et al., 2001) with a feeling of social togetherness, thus leading to a low social distance.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>digital tools).</td>
</tr>
</tbody>
</table>
Table 2

The impact of different scenarios on tourists’ choice of a certain accommodation type and explanatory effect of need for physical distance

**MAIN MODEL** (LR chi-squared = 13.27; Prob > chi-squared = 0.1030)

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>β</th>
<th>p</th>
<th>SE</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>DV: Type of accommodation chosen (= -1, shared flat)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>2.309</td>
<td>0.081</td>
<td>1.323</td>
<td>-0.284</td>
</tr>
<tr>
<td>Pandemic **</td>
<td>-1.135</td>
<td>0.011</td>
<td>0.449</td>
<td>-2.016</td>
</tr>
<tr>
<td>No physical distance **</td>
<td>-0.999</td>
<td>0.026</td>
<td>0.449</td>
<td>-1.879</td>
</tr>
<tr>
<td>Age</td>
<td>-0.377</td>
<td>0.332</td>
<td>0.039</td>
<td>-0.114</td>
</tr>
<tr>
<td>Female</td>
<td>-0.236</td>
<td>0.595</td>
<td>0.444</td>
<td>-1.106</td>
</tr>
</tbody>
</table>

DV: Type of accommodation chosen (= 0, hotel)

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>β</th>
<th>p</th>
<th>SE</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.567</td>
<td>0.236</td>
<td>1.323</td>
<td>-1.026</td>
</tr>
<tr>
<td>Pandemic*</td>
<td>-0.760</td>
<td>0.081</td>
<td>0.435</td>
<td>-1.613</td>
</tr>
<tr>
<td>No physical distance</td>
<td>-0.543</td>
<td>0.211</td>
<td>0.434</td>
<td>-1.394</td>
</tr>
<tr>
<td>Age</td>
<td>-0.026</td>
<td>0.507</td>
<td>0.039</td>
<td>-0.101</td>
</tr>
<tr>
<td>Female</td>
<td>-0.205</td>
<td>0.638</td>
<td>0.039</td>
<td>-1.061</td>
</tr>
</tbody>
</table>

**MODEL INCLUDING INTERACTION** (LR chi-squared = 22.47; Prob > chi-squared = 0.0129)

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>β</th>
<th>p</th>
<th>SE</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>DV: Type of accommodation chosen (= -1, shared flat)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>1.607</td>
<td>0.230</td>
<td>1.339</td>
<td>-1.019</td>
</tr>
<tr>
<td>Pandemic</td>
<td>-0.013</td>
<td>0.983</td>
<td>0.587</td>
<td>-1.164</td>
</tr>
<tr>
<td>No physical distance</td>
<td>0.167</td>
<td>0.782</td>
<td>0.602</td>
<td>-1.014</td>
</tr>
<tr>
<td>Pandemic x No physical distance***</td>
<td>-2.819</td>
<td>0.008</td>
<td>1.059</td>
<td>-4.894</td>
</tr>
<tr>
<td>Age</td>
<td>-0.031</td>
<td>0.427</td>
<td>0.039</td>
<td>-0.109</td>
</tr>
<tr>
<td>Female</td>
<td>-0.265</td>
<td>0.563</td>
<td>0.458</td>
<td>-1.163</td>
</tr>
</tbody>
</table>

DV: Type of accommodation chosen (= 0, hotel)

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>β</th>
<th>p</th>
<th>SE</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>0.932</td>
<td>0.490</td>
<td>1.349</td>
<td>-1.712</td>
</tr>
<tr>
<td>Pandemic</td>
<td>0.244</td>
<td>0.712</td>
<td>0.607</td>
<td>-0.966</td>
</tr>
<tr>
<td>No physical distance</td>
<td>0.473</td>
<td>0.442</td>
<td>0.616</td>
<td>-0.734</td>
</tr>
<tr>
<td>Pandemic x No physical distance**</td>
<td>-1.954</td>
<td>0.030</td>
<td>0.900</td>
<td>-3.719</td>
</tr>
<tr>
<td>Age</td>
<td>-0.020</td>
<td>0.605</td>
<td>0.039</td>
<td>-0.097</td>
</tr>
<tr>
<td>Female</td>
<td>-0.227</td>
<td>0.613</td>
<td>0.448</td>
<td>-1.106</td>
</tr>
</tbody>
</table>

Note. Type of accommodation chosen (= 1, full flat) = baseline. Coefficients in bold represent significant results. *$p = <0.1$  **$p = <0.05$  ***$p = <0.01$  ****$p = <0.001$