The changing determinants of tourists’ repurchase intention: the case of short-term rentals during the COVID-19 pandemic

Article  (Accepted Version)


This version is available from Sussex Research Online: http://sro.sussex.ac.uk/id/eprint/108809/

This document is made available in accordance with publisher policies and may differ from the published version or from the version of record. If you wish to cite this item you are advised to consult the publisher’s version. Please see the URL above for details on accessing the published version.

Copyright and reuse:
Sussex Research Online is a digital repository of the research output of the University.

Copyright and all moral rights to the version of the paper presented here belong to the individual author(s) and/or other copyright owners. To the extent reasonable and practicable, the material made available in SRO has been checked for eligibility before being made available.

Copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational, or not-for-profit purposes without prior permission or charge, provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

http://sro.sussex.ac.uk
The changing determinants of tourists’ repurchase intention: The case of short-term rentals during the COVID-19 pandemic

**Purpose:** Adopting Ajzen’s theory of planned behaviour theoretical framework, this paper aims to explore repurchase intentions among short-term rental users and change in determinants of repurchase intention in the context of the COVID-19 pandemic.

**Design/methodology/approach:** Data for the research was collected via a cross-country quantitative survey (N=1433) in five European countries: Croatia, Italy, Spain, Turkey and the UK during 2020. Trust, perceived value, authenticity and perceived risk were incorporated into the structural equation model as part of an integrated analysis of antecedents of repurchase intention.

**Findings:** Perceived value and authenticity are the key drivers of a positive attitude to repurchase of short-term rentals even after the pandemic. The pandemic modified the role of perceived risk in determining attitude towards short-term rentals as perceived risks could negatively affect attitude and repurchase intention after COVID-19. Trust in the platform and the host became a significant determinant of repurchase intentions after the spread of COVID-19.

**Research limitations/implications:** Our analysis has shown the link between attitude, subjective norms, perceived behavioural control and repurchase intention, and has thus demonstrated a successful application of the theory of planned behaviour to short-term rental users.

**Originality/value:** The results of this study suggest a possible reconceptualisation of repurchase determinants due to the pandemic. The study offers a timely contribution to the research on the impact of the pandemic on the determinants of tourists’ repurchase intentions.

**Keywords:** COVID-19, peer-to-peer accommodation, repurchase intention, short-term rentals, tourist behaviour

---

1. **Introduction**

The rapid growth of digital platforms such as Airbnb, HomeAway and Booking.com has been shaking up the tourism market (Guttentag, 2015; Young et al., 2017). The digital platforms have enabled not only professional companies but also individuals (peers) to offer their unused spaces for short-term rental (STR) to other interested individual peers (Dolnicar, 2017; Gerwe and Silva, 2020). Within STRs, there are professional and individual service providers. Although platforms like Airbnb or HomeAway started as peer-to-peer (P2P) accommodation providers and Booking.com as a professional accommodation provider, nowadays all STR platforms offer both P2P and professional accommodation services, with an increasing trend towards professionalisation (Deboosere et al., 2019; Katsinas, 2021). STRs have been established as a cost-effective alternative to the traditional accommodation options (Birinci et al., 2017; Chen and Chang, 2018; Shuqair et al., 2019; Sthapit and Jimenez-Barreto, 2018; Tran and Filimonau, 2020; Tussyadiah and Pesonen, 2018), albeit several other catalysts and obstacles trigger or prevent the use of STRs. STRs have been recognised as a new business opportunity which led to the professionalisation of hosting and commercialisation of the STR business, contradictory to the basic principles of the sharing economy (Gil and Sequera, 2020).
As a result, there has been the need for research that aims to understand various factors that motivate and constrain guests’ decisions to use STR platforms (Guttentag et al., 2017; So et al., 2018; Tavana et al., 2020).

While there has been a general agreement on the importance of economic factors in motivating people to choose STRs, studies also showed the influence of other factors, such as gaining authentic or ‘local’ experiences (Bucher et al., 2018; Liang et al., 2018; Paulauskaitė et al., 2017; Pesonen and Tussyadiah, 2017; Shuqair et al., 2019), creating social or interpersonal relationships (Guttentag et al., 2017; Lutz and Newlands, 2018; Moon et al., 2019; Zhu et al., 2019) and ‘practical’ benefits, such as having a kitchen or a washing machine (Belarmino et al., 2019; Guttentag, 2017; Tran and Filimonau, 2020). Thus, along with searching for affordable options, tourists are increasingly seeking genuine, authentic, local and unique experiences (Bucher et al., 2018; Pesonen and Tussyadiah, 2017; Shuqair et al., 2019). Tourists who choose STRs benefit from local experience and the option of staying in a ‘non-touristy’ area (Guttentag, 2015). Nevertheless, the use of STRs could be restrained by perceived risks (Chen and Chang, 2018; Ert et al., 2016; Guttentag, 2015; Huang et al., 2020; Reinhold and Dolnicar, 2017; Tussyadiah and Pesonen, 2018) related to security of the transaction, quality of the accommodation and relations with the host.

However, in light of the COVID-19 pandemic, which resulted in significant restrictions to travel during the period from 2020 to 2021, it is possible to expect changes in how tourists choose and evaluate their travel experiences and expectations (Wen et al., 2020). Recent findings point to the increase of shorter travel (Li et al., 2021), just as tourists may wait for greater control of the pandemic and postpone travel (Peluso and Pichierri, 2020) or avoid crowded destinations, which may result in choosing STRs over traditional accommodation options (Zoğal et al., 2020). This paper aims to develop these points further by looking at the consumers’ STR repurchase intentions and the critical factors influencing STR users’ decisions. Drawing upon the theory of planned behaviour (TPB) (Ajzen, 1991) and using structural equation modelling to analyse the data, this paper seeks to answer whether the determinants of consumers’ repurchase intentions changed after COVID-19. More specifically, trust, perceived value, authenticity and perceived risk were explored due to their documented impact on the attitude towards STR repurchase intention. The paper is based on the data collected via a cross-country survey in five European countries, namely Croatia, Italy, Spain, Turkey and the UK. A total of 1,433 surveys were fulfilled by the same pool of respondents addressing both before and after COVID-19 scenarios.

The findings of the present study contribute to further conceptualisations of attributes, not only in maintaining the existing consumers, but also attracting new STR consumers in COVID-19 times. Despite the significant body of literature about the impact of the pandemic on the tourism industry in general, the pertinent literature still lacks studies focusing entirely on the STR industry, rather than merely producing outputs for specific platforms. Our paper aims to fill this gap by specifically concentrating on exploring the determinants of repurchase intentions of STR users considering both before and after the COVID-19 pandemic circumstances. The results of the paper offer important insights for future studies by revealing the notable effects of the pandemic, which serve the beneficiary needs of both tourism practitioners and policymakers in developing effective strategies for post-pandemic tourism recovery.

2. Literature review
2.1. Theory of planned behaviour and STR guests’ behaviour
TPB (Ajzen, 1991) is often used in the exploration of repurchase intentions and travellers’
behavioural intentions in tourism and hospitality research (Chien et al., 2012; Hsu and Huang, 2012;
So et al., 2018). The predictive power of TPB concerning P2P accommodation and the STR market
has been demonstrated by previous studies (Kim et al., 2018; Mao and Lyu, 2017; Meng and Cui,
2020; So et al., 2018; Sthapit, 2019) that successfully applied and expanded the theory. As TPB
postulates, intentions which account for considerable variance in actual behaviour (Ajzen, 1991) can
be predicted with high accuracy considering three key elements: (a) attitudes towards the behaviour;
(b) subjective norms; and (c) perceived behavioural control. According to TPB, attitudes are defined
as the way an individual perceives the consequences of their behaviour, either positive or negative.
Subjective norms refer to the individual perception of the social pressure to perform or not perform
certain behaviour (Wang and Ritchie, 2012). Perceived behaviour control encompasses “people’s
perception of the ease or difficulty of performing the behaviour of interest” (Ajzen, 1991: 183) or
how an individual perceives factors which promote or hinder the execution behaviour. As follows
from TPB: “a person’s perceived behavioural control should be greater when he/she has significant
resources and opportunities” (Mao and Lyu, 2017: 3). Relying upon the fundamental premises of
TPB, we initially hypothesise:

\[ H_{1a}: \text{There is a positive relationship between perceived behavioural control and STR repurchase intention before the COVID-19 pandemic.} \]

\[ H_{1b}: \text{There is a positive relationship between perceived behavioural control and STR repurchase intention after the COVID-19 pandemic.} \]

\[ H_{2a}: \text{There is a positive relationship between subjective norms and STR repurchase intention before the COVID-19 pandemic.} \]

\[ H_{2b}: \text{There is a positive relationship between subjective norms and STR repurchase intention after the COVID-19 pandemic.} \]

\[ H_{3a}: \text{There is a positive relationship between attitude and repurchase intention over STRs before the COVID-19 pandemic.} \]

\[ H_{3b}: \text{There is a positive relationship between attitude and repurchase intention over STRs after the COVID-19 pandemic.} \]

2.2. Determinants of repurchase intention of STRs

In addition to the above-outlined factors, we considered additional determinants of repurchase
intention elaborated in the literature as particularly important in the context of STRs: perceived
authenticity, trust, perceived value and attitude. In this regard, perceived authenticity and trust have
been highlighted as the determinants that are fundamental to the business model relying on
transactions between strangers. Further, authenticity is linked to the perception of the service as
unique and ‘real’, which, if positive, has the potential to increase tourists’ repurchase behaviour
(Liang et al., 2018). Other studies also confirmed perceived authenticity as a significant predictor of
satisfaction, and, hence, expected to play a key role in determining repurchase intention of STR guests
(Birinci et al., 2017; Lalicic and Weismayer, 2017; Liang et al., 2017; Tavana et al., 2020). Moreover,
the study by Liang et al. (2018) found that trust was another important factor that mediated the
relationship between satisfaction and repurchase intention. The important role of perceived value has
been noted by researchers of STRs, which showed its effect on how tourists compare and evaluate
their accommodation in terms of quality, social value and emotional value (Hamenda, 2018). Studies
of perceived value in the context of Airbnb found its influence on repurchase intention as well as
positive attitude-repurchase intention relationship (Mao and Lyu, 2017; So et al., 2018; Tran and Filimonau, 2020). Finally, attitude mediated the effects perceived value and perceived risk on repurchase intention in the case of Airbnb (Mao and Lyu, 2017).

Several studies identified perceived risk among the main obstacles preventing repurchase intention of STRs (Cheng and Chang, 2018; 2016; Guttentag, 2015; Reinhold and Dohnicar, 2017; So et al., 2018). Consumer behaviour research found that perceived risks often lead to lower repurchase intention (Wu and Cheng, 2007). Studies on Airbnb also identified a negative impact of perceived risk on repurchase intention (Liang, 2015; Liang et al., 2018; Yang and Ahn, 2016). Based on the above, this study modified the model of TPB. When deploying modifications, the present study conforms to the outputs of prior research on repurchase intention of Airbnb users (e.g. Liang et al., 2018; Mao and Lyu, 2017). Our study, however, shifts focus away from Airbnb and considers the general STR market, thus filling an important research gap (Mody et al., 2021). Furthermore, our paper investigates repurchase intention during the unfolding COVID-19 outbreak.

2.2.1 Perceived value and attitude

Perceived value refers to the “consumer’s overall assessment of the utility of a product based on perceptions of what is received and what is given” (Zeithaml, 1988: 14). Liang et al. (2017: 78) defined perceived value as “the consumers’ overall assessment of the net values of booking accommodations via Airbnb”. Tourism and sharing economy studies show that perceived value can influence consumers’ attitude and repurchase intention (Heo, 2016; Nguyen, 2016; Mao and Lyu, 2017; Zhu et al., 2017). One of the ways of approaching perceived value is looking at it through the lens of value for money or monetary value (So et al., 2018) which implies consumers’ cost-benefit analysis of a product or a service (Razli et al., 2016). Monetary value has been an important factor for the success of the STR market, insofar as STRs offer more affordable prices compared to other accommodation providers, such as hotels (Guttentag et al., 2017). Furthermore, Mao and Lyu (2017) found a strong effect of perceived value (together with unique experience) on consumer attitude and repurchase intention of Airbnb properties. Akarsu et al. (2020) also demonstrate that high levels of perceived value led to the increase in likability of STRs. Nonetheless, the COVID-19 pandemic has created high levels of uncertainty and anxiety with the fear of contagion (Arbulú et al., 2021). In this sense, while perceived value has been acknowledged as a critical factor in influencing consumer behaviour, more research is needed to explore it, especially from the perspective of tourists (Razli et al., 2016) whose travelling habits might change post-COVID-19 (Lee and Deale, 2021). The following hypotheses are proposed:

H4a: There is a positive relationship between perceived value and attitude over STRs before the COVID-19 pandemic.

H4b: There is a positive relationship between perceived value and attitude over STRs after the COVID-19 pandemic.

2.2.2. Perceived authenticity and attitude

In the context of STRs, studies demonstrate that perceived authenticity can have a strong influence on consumers’ intentions and behaviour (Akarsu et al., 2020; Guttentag et al., 2018; Liang et al., 2018; Paulauskaite et al., 2017). Perceived authenticity refers to an experience of social interaction between host and consumers, attractive service or the idea of belonging to a community through the platform (Akarsu et al., 2020). It can also be defined as “perceptions of Airbnb consumers’ cognitive
recognition of ‘real’ experiences of staying in an Airbnb place, which will change due to evaluators’ perceptions” (Liang et al., 2018: 79). Researchers emphasise that the perceived authenticity of STRs constitutes its distinctive feature (Guttentag, 2015), especially in some STR platforms such as Airbnb where the ‘living like a local’ type of experience is their motto (Paulauskaite et al., 2017). Studies distinguish between internal and external factors that influence perception of authenticity, including a sense of home with a particular kind of ambiance and atmosphere (see Zhu et al., 2019) created by the host, as well as a particular kind of sociability that emerges between hosts and guests, and which makes the whole experience co-shared (Paulauskaite et al., 2017). Recent studies that focus on the effects of the pandemic on the P2P accommodation market sector point to a potential change of the value of authenticity in post-pandemic travel and a possible switch to more remote and less sociable locations (Gerwe, 2021; Türk and Sap, 2021). Thus, the qualities of the accommodation that made it authentic in pre-pandemic times, “became a potential health hazard during the pandemic” (Gerwe, 2021: 4). For instance, increased importance of social distancing and cleanliness protocols could potentially increase people’s anxiety in staying in rented homes or sharing things in general (Gerwe, 2021).

H5a: There is a positive relationship between authenticity and attitude over STRs before the COVID-19 pandemic.

H5b: There is no relationship between authenticity and attitude over STRs after the COVID-19 pandemic.

2.2.3. Trust and attitude

According to previous research, trust is an important element of the P2P business model that facilitates trading and transactions between strangers. Successful operations of platforms such as Airbnb require confidence from both guests and hosts (Guttentag, 2013; Reinhold and Dolnicar, 2018). The particularly important role of trust for a collaborative economy has been revealed by Möhlmann (2015), who showed a strong relationship between trust and satisfaction with the sharing option. To develop and maintain trust-based relationships, STR platforms have been integrating various reputation mechanisms, including online reviews and rating systems (Ert et al., 2016; Ert and Fleischer, 2019). For instance, the mutual review system developed by Airbnb is crucial for establishing trusted relationships between hosts and guests (Kuhzady et al., 2020; Priporas et al., 2017), just as the inclusion of photos can also increase trust (Ert et al., 2016). Still, established trust mechanisms within STR platforms also have limitations, such as generally high review scores (Bridges and Vásquez, 2018; Ert et al., 2016) and discrimination (Farmaki and Kladou, 2020; Schor and Attwood-Charles, 2017). The loss of trust can be one of the key determinants of customer change of attitude (Vaughan and Daverio, 2016) by reducing the willingness of consumers and acting as a barrier to participate in P2P transactions (Olson, 2013). As transactions in the STR industry actualise at a distance, trust appears to be a major subject for STR consumers (Yang et al., 2019). Notwithstanding the necessity of immense trust in the STR industry to build a positive attitude, COVID-19 has raised concerns related to trust issues among different stakeholders (Hossain, 2021). Hence, the pandemic has triggered STR platforms to grasp more transparency in declaring the information.

H6a: There is a positive relationship between trust and attitude on STRs before the COVID-19 pandemic.

H6b: There is a positive relationship between trust and attitude on STRs after the COVID-19 pandemic.
pandemic.

2.2.4. Perceived risk and attitude

Studies about consumer behaviour of Airbnb users (Liang et al., 2018; So et al., 2018) referred to perceived risk as consumers’ beliefs in all possible negative results that may happen when booking accommodation. Specific perceived risks arise in relation to home-sharing (renting a room and staying with the host), such as physical abuse (physical violence or sexual assault from the host or other guests) (Birinci et al., 2017; Cheng and Chang, 2018; Ert et al., 2016; Guttentag, 2015; Reinhold and Dolnicar, 2017; Tussyadiah and Pesonen, 2018), privacy loss if hosts overstep boundaries (Huang et al., 2020; Reinhold and Dolnicar, 2017; Tran and Filimonau, 2020; Tussyadiah and Pesonen, 2018) and problems with living in an unknown house (e.g. not getting along with the hosts or other guests) (Liang et al., 2018).

On the other hand, perceived risks preventing tourists from using STRs in general include: low quality standards (e.g. poor cleanliness, noise) (Birinci et al., 2017; Guttentag, 2015; Huang et al., 2020; Zhang et al., 2020), misleading listing information (Huang et al., 2020; Reinhold and Dolnicar, 2017; Tran and Filimonau, 2020), the listing being a scam advertisement (Reinhold and Dolnicar, 2017), poor customer service (Huang et al., 2020), problems with getting access into the booked property (Liang et al., 2018), hazards with furniture, fittings and equipment (Huang et al., 2020; Wu and Cheng, 2019), theft or robbery (Huang et al., 2020; Reinhold and Dolnicar, 2017; Zhang et al., 2020), unsafe neighbourhood (Lim et al., 2020), issues with cybersecurity (Huang et al., 2020; Lim et al., 2020; Tran and Filimonau, 2020), and discrimination and xenophobia (Cheng and Foley, 2018; Schor and Attwood-Charles, 2017). Several studies identified a negative impact of perceived risk on repurchase intention (Liang et al., 2018; Yang and Ahn, 2016). Despite all previously identified risks, the STR market has continued growing worldwide because travellers minimised the perceived risks in contrast with the perceived benefits. In fact, So et al.’s (2018) study showed that perceived risk had no significant relationship to attitude or behavioural intentions.

New risks for STRs associated with the COVID-19 pandemic include perceived risks of contracting the disease (Kuhzady et al., 2020; Sigala, 2020) and the risk of lockdown (Hu and Lee, 2020). Hu and Lee (2020) observed a higher reduction in bookings in the major COVID-19 epicentres. Both Hu and Lee (2020) and Liam et al. (2020) found evidence that rooms experience more cancellations than entire properties, consistent with guests’ fears of contracting the virus in cases where social distance is lacking. To overcome the perceived risk of getting the virus while using STRs, some studies (Naumov et al., 2020) show that STR platforms revised their cleaning protocols during the first wave of the COVID-19 pandemic (Chadwick, 2020; Wood, 2020). On the other hand, Zoğal et al. (2020) suggest that perceived risk of contracting the virus in vacation-home rentals as compared to traditional accommodation (e.g. hotels) is lower due to the social distance these types of accommodation allow. Therefore, the minimised perceived risk of contracting the virus in STRs may play a positive role in influencing consumer attitude and repurchase intention. Nevertheless, research is not conclusive yet. Based on previous research, two hypotheses are suggested:

H7a: There is a negative relationship between perceived risk and attitude over STRs before the COVID-19 pandemic.

H7b: There is a negative relationship between perceived risk and attitude over STRs after the COVID-19 pandemic.
3. Methodology

3.1. Questionnaire design

This study was administered online with a structured questionnaire involving four parts: (a) respondents’ general STR behaviour; (b) questions related to the constructs before the COVID-19 scenario; (c) questions related to the constructs after the COVID-19 scenario; and (d) demographics. All the respondents answered both before and after COVID-19 parts of the questionnaire.

The operationalisation of the constructs was adopted from the established measures with reliability values higher than 0.70 (Nunnally and Bernstein, 1994) (see Table I). The questions related to the construct items within the questionnaire were analysed through a seven-point Likert scale, varying from strongly disagree (1) to strongly agree (7). Following previous studies (e.g. Mao and Lyu, 2017; So et al., 2018), the perceived risk scale (seven items) was adapted from Jarvenpaa et al. (2000) and Featherman and Pavlou (2003), while trust was a ten-item scale derived from Liang et al. (2018). Moreover, perceived value was adapted from Han et al. (2011), consisting of five items, while authenticity was taken from Liang et al. (2017) and attitude was adapted from Ajzen and Fishbein (1975) (six and five items respectively). Concerning repurchase intention, the seven-item scale was obtained from the studies of Ajzen and Fishbein (1980), and Jeong et al. (2003). In terms of the control variables, subjective norms, consisting of six items, were taken from Ajzen and Fishbein (1980), just as perceived behavioural control. The survey was originally in English and subsequently translated into four different languages, with the aid of two academics for each of them, through the back-translation method. The measurement items were determined through a literature review and an elicitation study (e.g. Han et al., 2010; Perri et al., 2020). In this regard, the elicitation study was performed by phone interviews in which participants responded to open-ended eliciting questions, providing an opportunity to modify sentences or statements that may lead to misunderstandings. Further, a revised version of the questionnaire was presented to two potential respondents with an intent to control whether each item in the questionnaire was well understood. The results of the pilot test reflected questions’ clarity and face validity in the preliminary steps of the present study.

3.2. Sampling and data collection

An online questionnaire was distributed by an external data research firm (Dynata). The data was collected in five different countries (Croatia, Italy, Spain, Turkey and the UK) from July 2020 to September 2020, through a judgemental sampling method, which is a non-probability sampling, and is an approach where the researchers are interested in determining a particular group of respondents having specific knowledge on the subject of interest, which in turn, produce more accurate findings with the selection of a more representative sample (Sekaran and Bougie, 2016). More specifically, we target specific respondents, encompassing individuals who have travelled either domestically or internationally for holiday or work purposes at least once in the last two years. Respondents were not paid for their participation, however, Amazon gift cards were distributed in lottery draws as incentives to increase the response rate. Through the judgemental sampling method, the data from 2,126 potential respondents was gathered. Of the 2,126 individuals, 2,063 questionnaires were usable due to the missing values in some questionnaires. In total, 1,433 (69.4%) met the screening criteria (travelled at least once in the last two years) and only those questionnaires were further examined (Appendix A).
3.3. Common method and non-response bias

Since the data was gathered through a single source, responding to the questions related to both independent (e.g. trust) and dependent constructs (e.g. repurchase intention), a common method bias (CMB) may pose a possible risk (Doty and Glick, 1998). A series of methods was used with an intent to minimise CMB. First, the anonymity of each respondent was ensured to motivate them to respond to the questions honestly. Second, Harman’s single-factor tests (ex post statistical procedures) prove that the total variance explained falls within the interval 46-50% for the two models. Moreover, CMB has been further minimised by combining ex post statistics with procedural (ex ante) strategies (Podsakoff et al., 2003). Ex ante measures applied include spatial, temporal and psychological separation of constructs/items in the questionnaire structure. Third, CMB was checked through the marker variable method by involving theoretically unrelated constructs (i.e. materialist consumption awareness) to the analysis as a proxy for common method variance (Lindell and Whitney, 2001). The marker variable did not reveal any significant correlation with other constructs’ variables in both before COVID-19 and after COVID-19 models (rM=0.022; rM=-0.003, p>0.05), hereafter ‘BC’ and ‘AC’, respectively. Therefore, empirical evidence ensures that CMB does not create a potential problem for this research. Non-response bias was controlled, relying upon the examination of early and late respondents’ responses and is not likely to be an issue in this research. As some variable correlations may be signs of possible multicollinearity, we conducted multicollinearity checks through the variance inflation factors (VIF). The mean VIF for all exogenous constructs was 2.72 in the BC model, and 3.00 in the AC model, which are lower than the threshold limit of 10 (Koutsoyiannis, 1977), elaborating that multicollinearity is unlikely in this research (Neter et al., 1990).

4. Results

4.1. Measurement model

Data has been reviewed to assess the general linear assumption. The exploratory factor analysis (EFA) was run by using the principal component analysis (PCA) extraction with promax rotation (Anderson and Gerbing, 1988; Ford et al., 1986; Hair et al., 2006). Unidimensionality, and hence, suitability for further factor analysis, has been checked. Construct reliability has been assessed by considering item-to-total correlation (ITC) and Cronbach’s alpha (α) (Cronbach, 1951), while construct validity has been tested through the confirmatory factor analysis (CFA), also running a preliminary analysis for suitability of multigroup structural equation model (SEM) analysis, according to Steenkamp and Baumgartner’s (1998) reference work. The model hypotheses have been tested with an SEM (Kim, 2008b; Reisinger and Turner, 1999). This procedure has been followed for both BC and AC models.

4.1.1. Exploratory factor analysis (EFA)

Reliability checks considered values of α, ITC and α-if-item-deleted (AID) reported in Table I (Nunnally and Bernstein, 1994). All alpha values exceed the minimum threshold, proving data reliability (De Vellis, 1991). Bartlett’s sphericity test (BC model: 75,394.097, sign.=0.000, df=1,225; AC model: 83,782.232, sign.=0.000, df=1,225) shows significant variables correlation. Kaiser-Meyer-Olkin (KMO) test (BC model: 0.976; AC model: 0.979) ensures the feasibility of factor analysis (Huh, 2001). Communalities are above the minimum threshold, confirming great variance explanation. The PCA extraction does lead to significant loss of information, while proving convergent and discriminant validity.

[Insert Table I here]
4.1.2. Confirmatory factor analysis (CFA), preliminary checks and invariance tests for multi-group SEM

The BC model shows good fit indices: $\chi^2=9,986.533; df=1,147; p$-value ($p$)=0.000 with $\chi^2/df$ (Chi-Square/df)=8.707; Standardized root mean square residual (StdRMR)=0.0630; Root mean squared error of approximation (RMSEA)=0.0859; $p$-value Test of close fit ($pTcf$)=0.000; Adjusted goodness of fit index (AGFI)=0.700; Goodness of fit index (GFI)=0.730; Comparative/Confirmatory fit index (CFI)=0.978; Tucker-Lewis index (TLI)$\equiv$ Non-normed fit index (NNFI)=0.976; Normed fit index (NFI)=0.975 (Hair et al., 2006). The AC model shows good fit indices, too: $\chi^2=9,607.442; df=1,147; p=0.000; \text{Chi-Square/df}=8.376; \text{RMSEA}=0.0826; \text{pTcf}=0.000; \text{GFI}=0.743; \text{AGFI}=0.715; \text{StdRMR}=0.0623; \text{NFI}=0.979; \text{CFI}=0.982$ and $\text{TLI}\equiv\text{NNFI}=0.981$ (Hair et al., 2006). As for the $\chi^2/df$ ratio, we attribute the above-the-threshold value to its limited reliability and cautious applicability as a stand-alone index of model fit, as reported in Hooper et al. (2008). Hu and Bentler (1999) recommend a two-index presentation format, always including StdRMR with the NNFI (TLI), RMSEA or CFI, as more meaningful fit indices (Hooper et al., 2008).

In both models, RMSEA is acceptable, but $p$-value is below the threshold. Potential issues are also detected for GFI and AGFI, but these indices “should be used with caution” (Hooper et al., 2008: 56), as “often relied on purely for historical reasons, rather than for their sophistication”, since several biases affect both of them (McDonald and Ho, 2002; Hooper et al., 2008;). In fact, StdRMR – the most reliable statistic to detect non-/bad-fitting models – is almost excellent. Relative fit indices (e.g. NFI, CFI, NNFI) are excellent. All $| \text{Standardized Residuals} | < 3$, without blocks of residuals, prove an excellent goodness of fit. CFA results are reported in Appendix B. Completely standardised loading values and $| \text{t-values} |$ are acceptable: convergent validity and unidimensionality are fully supported (Anderson and Gerbing, 1988). All composite reliability (CR) and average variance extracted (AVE) values are excellent (Bagozzi and Yi, 1988).

After the confirmation of the construct reliability, discriminant validity has been tested. In detail, discriminant validity between two factors is confirmed when both their corresponding values of AVE are higher than the coefficients of determination (Kim, 2008a). For both models, some coefficients of determination related to two variables (Attitude and Trust) are close to the threshold, however, discriminant validity is confirmed for all other couples of constructs (Fornell and Larcker, 1981). In general, most latent variables were shown to be reliable and valid. All construct summary statistics (correlations, means, standard deviations, CRs and AVEs) are reported in Tables II and III for both models.

Prior to applying multigroup SEM analysis, Steenkamp and Baumgartner’s (1998) preliminary analyses were conducted by using nested models. Significant differences are shown by the delta-chi-square tests. Then, configural invariance was tested. Goodness of fit is questionable: most absolute fit indices are not acceptable at all ($\chi^2=19,593.975; df=2.294; p=0.000; \text{Chi-Square/df}=8.541; \text{RMSEA}=0.0842; \text{pTcf}=0.000; \text{AGFI}\equiv0.700; \text{GFI}=0.743$). Moreover, discriminant validity is not confirmed: some AVEs are lower than the corresponding correlation coefficients. Therefore, configural invariance is not confirmed, and multigroup SEM analysis is stopped. Such results are explained by the unsatisfied requirement of groups’ independence in multigroup SEM: in fact, in our case, the same respondents answered both parts (before and after COVID-19) of the questionnaire.

[Insert Table II here]
[Insert Table III here]

4.2. Hypotheses testing and SEM
The hypothesised relationships among latent variables have been analysed with full SEM and assuring the robustness and reliability of results towards rejection of multivariate normality assumption. As for the BC model, the SEM analysis provides the following goodness-of-fit statistics: $\chi^2=10,288.062$; $df=1,153$; $p=0.000$; Chi-Square/df=8.923; StdRMR=0.0642; RMSEA=0.0883; $p_{Tcf}=0.000$; AGFI=0.689; GFI=0.718; CFI=0.977; TLI $\neq$ NNFI=0.976; NFI=0.974 (Hair et al., 2006). As for the AC model, the SEM analysis provides the following goodness-of-fit statistics: $\chi^2=12,895.308$; $df=1,153$; $p=0.000$; Chi-Square/df=11.184; StdRMR=0.0643; RMSEA=0.0843; $p_{Tcf}=0.000$; AGFI=0.707; GFI=0.735; CFI=0.981; TLI $\neq$ NNFI=0.980; NFI=0.979 (Hair et al., 2006). As in CFA, for both models, RMSEA provides an acceptable value, despite a p-value=0.000, and, above all, the StdRMR is always around the point of excellence. Furthermore, all relative fit indices (NFI, NNFI and CFI) ensure the goodness of fit of the hypothesised models. Likewise, all $|\text{Standardized Residuals}| < 3$ in both models, and no blocks of residuals are detected.

Figure I depicts model and hypotheses testing: the linkages among variables are confirmed and most hypotheses are supported. An exception is the hypothesised effect of trust on attitude in the BC model, which is not significant (H$_{6a}$). The positive impact of perceived risk on repurchase intention before COVID-19 was confirmed (H$_{7a}$). Additionally, contrary to expectations, subjective norms had a negative impact on repurchase intention, both before and after COVID-19 (H$_{2a}$ and H$_{2b}$).

5. Discussion and conclusions

5.1. Conclusions

This work contributes to the theoretical knowledge of the determinants of repurchase intention in STRs, together with an empirical quantification of their relative impacts, before and after the pandemic. Despite the fact that the research into the ‘post-COVID-19 world’ has been proliferating in many different fields, including the travel industry (Li et al., 2021; Zoğal, 2020), the need for the present study is motivated by the lack of studies that focus entirely on the STR industry. Hence, the goal of this paper is to contribute specifically to the investigation of the determinants of repurchase intention in STRs, and their change as a consequence of the pandemic, by means of an extended version of the TPB (Ajzen, 1991).

First, the core TPB’s constructs affecting repurchase intention – i.e. behavioural attitude, perceived behavioural control and subjective behavioural norms – are integrated with additional constructs emerging from literature: authenticity, trust, perceived value and perceived risk. This integrated model provides a more comprehensive perspective of analysis and a wider understanding of repurchase determinants.

Second, findings confirm previous research on STRs about the significant impact of attitude (positive) and subjective norms (negative) on repurchase (Mao and Lyu, 2017), and also unveil a novel result that is the (positive) significant impact of perceived behavioural control. Hence, the significance of the core TPB’s constructs, either before or after COVID-19, suggests the methodological and theoretical correctness of its application to the STR field, which is hitherto underexplored.

Third, some changes in impact magnitude were detected between the before and after COVID-19 scenarios. After COVID-19, subjective norms lost importance and behavioural control gained importance as the determinant of repurchase intention. The interpretation of this result suggests that information, knowledge and experience of others that form subjective norms on STRs seem more
valued when deciding to repeat an STR stay before COVID-19, whilst family and friends are less important influencers to choosing STRs in pandemic times. After the pandemic, repurchase intention is more strongly impacted by perceived behavioural control, suggesting that guests’ perceptions of their own ability to control the whole situation with COVID-19 will surely impact their behaviour when it comes to repurchasing accommodation. Also, the hypothesised relationship between attitude and repurchase intention is confirmed, although after COVID-19, the strong impact of this determinant is slightly weaker. Probably, due to COVID-19, tourists may feel some insecurity over safety or other issues, such as cleanliness, which consequently impacts their attitudes towards STRs.

5.2. Theoretical implications

Drawing on existing studies and integrating concepts from TPB, this study explored the role and changing value of significant determinants of repurchase intention before and after the pandemic, and thus, provided a first-hand analysis of data collected during the time when the pandemic was unfolding. In this way, the paper offers a timely contribution to a relevant and emerging field of research on consumer behaviour in the pandemic, as well as opens the discussion on the future of STRs in a pandemic from the consumer perspective.

From a theoretical perspective, this work has several implications. Primarily, it is the first and most comprehensive attempt to apply an extended TPB to STRs, by integrating the ‘classical’ three key constructs with additional antecedents found in literature (Akarsu et al., 2020; Liang et al., 2018; Vaughan and Davero, 2016 etc.). In particular, authenticity, perceived risk, perceived value and trust have been included in the TPB-based theoretical model as determinants of TPB’s attitude construct. Findings show that the latter acts as a mediator between the newly added constructs and the repurchase intention. Therefore, this model provides an updated and more comprehensive theoretical structure grounded on TPB.

Second, the conceptualisation of this framework that embraces multiple determinants helps in identifying unexplored relationships among TPB’s and non-TPB’s theoretical constructs, thus, improving the understanding of the multiple levels of individual motivations behind repurchase intention in STRs.

Third, the proposed TPB-based framework shows an excellent predictive power for the repurchase intention according to the application scenario, suggesting its applicability to the STRs. In detail, all TPB’s core variables are significant in the proposed model, but a negative relationship between repurchase intention and subjective norms is found, contrary to previous research findings that either found a positive relationship (Mao and Lyu, 2017; So et al., 2018) or no significant relationship (Möhlmann, 2018). Most likely, some other personal factors or other channels, such as ratings and social media, can have greater importance in supporting tourists’ decisions (Alonso-Almeida et al., 2019) than one’s social network. However, this finding requires further research with respect to STRs.

Fourth, the elicitation study conducted in the preliminary phase ensured the elicitation of domain-specific questions and concepts, thus providing a strong theoretical basis for the investigation of both TPB’s and non-TPB’s determinants of repurchase intention of STRs.

Fifth, findings validate the extension of the ‘classical’ TPB framework since the strong positive effect of perceived value and authenticity on attitudes confirms previous research findings (e.g. Mao and Lyu, 2017). Although trust (only in the AC model) and perceived risk are not comparable with perceived value and authenticity in terms of the strength of impact, they have a proven impact on overall attitude towards re-using STRs. It is somewhat surprising that perceived value still has an influential role after the COVID-19 outbreak. A possible explanation can be relied on the fact that
people tend to prefer staying at STRs with a shorter time and hesitate to stay at crowded places such as global hotel chains since the onset of the pandemic (Pham Minh and Ngoc Mai, 2021). This study also provides a relevant finding on how trust becomes a significant antecedent of attitudes only after the spread of the pandemic. Such a finding in the context of STRs is somewhat different than the general theoretical findings in the literature about the relationship between these two constructs (e.g. Vaughan and Daverio, 2016). The reasons explaining the significant impact after COVID-19 can be related to the changing travelling habits of consumers (Lee and Deale, 2021). Further, consumers may necessitate more openness in sharing information with an intent to build trust in the era of COVID-19 (Chesbrough, 2020). Perceived authenticity may also have a different value in the context of the post-COVID-19 STR market.

Sixth, the few significant changes between the before and after COVID-19 scenarios suggest an overall validity of the proposed TPB framework, and witness its methodological resilience in spite of dramatic events like pandemics.

Seventh, perceived risk confirms its negative role in both scenarios, thus, discouraging repurchase behaviour especially after COVID-19. However, some original findings are unveiled by our work if compared to So et al.’s (2018) that previously did not confirm the impact of perceived risk on attitude or behavioural intention towards STRs, most likely due to many mechanisms already enforced to minimise perceived risks (e.g. review systems). Our research results indicate that before the pandemic outbreak perceived risk had a weak, but surprisingly positive, impact on attitudes, whereas after the pandemic, it has a negative impact due to the numerous risks related to the virus and the lockdown restrictions (Hu and Lee, 2020; Kuhzady et al., 2020; Sigala, 2020). In this sense, while acknowledging the role of trust and reputation mechanisms as foundational constructs of a sharing economy (Altinay and Taheri, 2019; Mody et al., 2020), our paper also highlights the need to explore the significance and the meaning of risk and factors that can be considered as risky when undertaking international travel nowadays.

5.3. Practical implications

The findings of this paper can help tourism practitioners and policymakers to develop specific, effective strategies to boost tourists’ confidence after facing a public health crisis. Practitioners should be aware of the necessity to reinforce trust among tourists using STRs. In a pandemic, trust and the impression of security during the use of STRs can be increased by applying additional sanitary measures, such as enhanced cleaning. Findings show that perceived risk generates mistrust and, therefore, minimising STR users’ perceived risk by applying specific cleaning protocols (and properly advertising this to the users) will enhance their trust in the accommodation service. Additional transparency, trustworthiness and increased confidence could be achieved by using a third-party certification about protocols against COVID-19. Such reinforcement of a positive attitude to STRs increases the possibility of repurchasing. In fact, STR accreditations, such as Quality in Tourism (2019) in the UK, should be implemented to increase the perceived behavioural control after COVID-19. Thus, a proper perceived behavioural control due to better information and knowledge of STR operations in times of new ‘rules of the game’ could have a strong impact on STRs’ reactivation and repurchase intention when the closure of frontiers and travel restrictions finishes.

Further, it could be beneficial for platforms and providers of STR to openly communicate all information about the COVID-19 situation or protective measures taken so that prospective guests increase their feelings of control of the situation and decrease the level of perceived risk. For example, the implementation of flexible cancellation policies by most platforms was a good decision to decrease the level of perceived risks. However, due to COVID-19, the number of perceived risks has
generally increased, and such risks are no longer associated only with the accommodation or host, but guests might be looking at the situation in certain locations and avoid COVID-19 epicentres. Therefore, appropriate anti-pandemic measures by local or national authorities could also help to minimise perceived risks.

5.4. Limitations and future research directions

As does all research, this research has some limitations. At the time of this research, the first COVID-19 wave was ending in Europe. Considering that further waves of the COVID-19 pandemic were even more devastating than the first one, there could be additional changes in repurchase intentions after COVID-19. Such changes could be related, for instance, to either new constructs to be integrated into the tested model, different relationships between the same tested constructs or different causal intensity between constructs. This study examined the immediate effects of the COVID-19 pandemic and long-term effects are still to be explored. The study was conducted in five different countries, so the generalisation of the findings should be an important concern regarding the selection of a non-probability sampling method.

Further research into this global crisis should be carried out with a bigger and more varied sample and using a longitudinal approach. Future studies can conduct experimental design to examine cause and effect relations, because this study has a cross-sectional design. Therefore, subsequent studies may stem from this research in the medium/long term, paving the way for new research avenues aimed at identifying new constructs, scales and/or modules. Despite the fact that we conducted this study with respondents who have travelled at least once in the last two years, STRs are regarded as a recently developed accommodation type, so tourists may not be completely familiar with all types of different STR platforms. The question around the most extensively used specific platforms of the respondents remains open. Therefore, future researchers should put special emphasis on the construct of familiarity. Besides, future research can concentrate on whether behavioural intentions of tourists change with respect to market mediation, referring to different modes of exchange which are either stimulated by prosocial and altruistic drivers (e.g. couch-surfing), and financial and reciprocal motivations (e.g. Airbnb) (Bardhi and Eckhardt, 2012) after the COVID-19 pandemic.

References


Appendix A

[Insert Table IA here]

Appendix B

[Insert Table IIA here]