Tangible and intangible hotel in-room amenities in shaping customer experience and the consequences in the with-corona era

Abstract

Purpose – This research draws on customer experience theory to shed light on how hotel in-room amenities foster customer experience, which continues to form brand attitude and loyalty before and during the pandemic. Also, this study assesses the impact of the pandemic in the relationships among proposed constructs on the basis of risk perception theory.

Design/methodology/approach – A quantitative approach was deployed using a total of 379 responses, for evaluating the measurement model through confirmatory factor analysis and testing proposed hypotheses through structural equation modelling.

Findings – The findings provide initial support for our predictions, except for the influence of brand attitude on brand loyalty before the pandemic. Particularly, the analysis results observe that the effect of tangible amenities on customer experience was stronger before the COVID-19, whereas the impact of intangible amenities on customer experience is greater during the pandemic. Furthermore, the results validate the significant moderating influence of the COVID-19 pandemic in the path between customer experience and brand loyalty.

Practical implications – This present study guides hotel professionals to be more effective in the management of appropriate in-room amenity in order to create a satisfactory customer experience, which contributes to brand loyalty in the with-corona era.

Originality/value – The study differs from earlier studies in that it investigates how the pandemic changes the role of hotel in-room amenities on customer experience, which in turn increases brand attitude and brand loyalty for the first time.

Keywords In-room amenity, Customer experience, Brand attitude, Brand loyalty, COVID-19

Introduction

Almost every hospitality company has given the highest priority to creating superior customer experience (Berry *et al.*, 2002; Han *et al.*, 2019). It is because that today's mature consumers have a lot of knowledge, multiple options, and higher expectations, and thus, they find the service providers offering distinctive experience increasingly attractive. In addition, academics denoted that a clear comprehension of customer experience better predicts brand loyalty, one of the major revenue streams in the service industry (Kandampully *et al.*, 2018; Srivastava and Kaul, 2016). Customer experience at hotels has been spotlighted in parallel and studies constantly discuss the driving forces of memorable customer experience which affect brand loyalty formation (Rahimian *et al.*, 2021; Zarezadeh *et al.*, 2022).

The guest room is the primary product of hotels, and in-room amenities are important part of the guest room essentials. In-room amenities originated from toiletries, and they involve items that are necessary for an overnight stay and incidentals to the guest room (Heo and Hyun, 2015). Moreover, amenities in the modern world encompass items such as eco-friendly amenities retrieved from society's demands and a contemporary lifestyle (Kim, Baloglu *et al.*, 2021; Park et al., 2021). Likewise, in-room amenities involve a wide range of that include coffee/tea machines, dressing tables, sofas, housekeeping services, door locks, digital media, and various sensory cues. Scholars suggest that many hospitality offerings involve tangible and intangible attributes (Kim, Han *et al.*, 2021; Tamwatin *et al.*, 2015), and similarly, in-room amenities are classified as tangible and intangible (Ding and Keh, 2017; Marić *et al.*, 2016).

Additional in-room amenities give hotels burdens on their operating costs and the deployment of each in-room amenities should be carefully investigated beforehand. More

importantly, hotel practitioners utilize in-room amenities as tools to improve the quality of guest rooms. That is, an intelligent choice of in-room amenities strengthens the competitiveness of a firm which includes the creation of an exceptional customer experience (Chittiprolu *et al.*, 2021; Dev and Kumar, 2019). Bilgihan *et al.* (2016) explained how leading-edge in-room technologies could enhance the guest experience. They concretely articulated the recent innovative technologies allow guests to change the physical attributions of guest rooms, such as color and sound, and these in-room technology amenities affect guests' personalized experience. Then, these created customer experience is likely associated with positive brand attitude, which results from benefits of attributes and induces behavior in a more positive way (Ahn and Back, 2018; Foroudi, 2019).

In the meantime, in-room amenities have been studied as core attributes for customers' evaluation of hotel, which affects customer loyalty toward a brand (Kim, Lee *et al.*, 2019; Usta *et al.*, 2011). Service firms generally enjoy an increased market share and more revenue when there are many loyal customers of the company (Han *et al.*, 2018). A decent quality of in-room amenities reinforces brand identification with the customers, which in turn improves the chances of developing customer loyalty (Blank, 2003). For example, the brand of in-room amenities matters as customers become more sophisticated, and many hotel companies have established the partnership with luxury brand to offer high-end toiletries (Heo and Hyun, 2015). Furthermore, the current literature accents that customer experience affects the development of positive customer attitude toward a brand, which in turn is prerequisite for creating brand loyalty (e.g., Alnawas and Hemsley-Brown, 2019; Guan *et al.*, 2021). Therefore, selecting appropriate in-room amenities which promotes unique customer experience requires careful analyses.

The COVID-19 outbreak has disrupted the hotel industry as it enforces the social distancing (Hao and Chon, 2022; Chan, Ma *et al.*, 2021). Customers at hotels during the pandemic avoid gathering in large crowds in the public places, including the hotel lobby, restaurants, and other facilities, instead spending more time in guestrooms (Honeywell Hospitality, 2021). Meanwhile, hotels began to implement new manuals which include new in-room amenities, such as precautionary measures, in order to overcome the challenges of the COVID-19 era (Davari *et al.*, 2022; Jiang and Wen, 2020; Lai and Wong, 2020). Academic evidence exists for the significance of in-room amenities in consumers' evaluation of a hotel experience (Bilgihan *et al.*, 2016; Heo and Hyun, 2015). Yet, the topic remains insufficiently researched in the prolonged pandemic era. This means that it is not well known how the COVID-19 pandemic has changed consumers' judgement on in-room amenities and the contributions to the customer experience, and its brand-related outcomes. Filling the void of the current literature, the purpose of this research is to discover the role of in-room amenities in creating a customer experience, which in turn increases brand attitude and brand loyalty in light of the pandemic. Furthermore, we aim to assess how COVID-19 causes differences in such relationships. To be precise, this study is designed to respond to the following research questions:

- What influence tangible and intangible hotel in-room amenities make on creating customer experience in consideration of the COVID-19?
- How customer experience, brand attitude, and brand loyalty are connected in view of the COVID-19 incident?
- Does the COVID-19 pandemic moderate the relationships among in-room amenities, customer experience, and the consequences?

The findings are anticipated to advance our current knowledge related to consumers' changed behavior in the hotel industry and offer novel insights for hotel practitioners in preparing the post COVID-19 world.

Literature review

Theoretical background

The customer experience theory was proposed by Brakus (2001). The theory elucidates how individuals respond to a broad range of experiential stimuli, such as packaging and environments, and it describes that customer experience includes five kinds of experience which are feeling, emotion, intelligence, body, and social interaction (Schmitt *et al.*, 2015). Additionally, the theory suggests how the customer experience could assist companies with their branding strategies. Meanwhile, Becker and Jaakkola (2020) pointed out that some of earlier studies overlapped customer experience with its outcome, such as value and satisfaction, and they proposed the separated concept of customer experience to respond the needs toward the unified customer experience theory.

The theory of perceived risk indicates that consumers tend to minimize uncertainties and avoid any negative consequences in their decision-making (Bauer, 1960). With this respect, the theory of perceived risk has been incorporated to studies that explain travelers' behavior during an epidemic (e.g., the case of Ebola and SARS). In particular, risk perception has been frequently adopted as a vital moderator in consumer behavior. Hence, the overarching theoretical framework which involves the customer experience theory and the risk perception theory is helpful in explaining the relationships among in-room amenities, customer experience, and the consequences, and the effect of the COVID-19 pandemic on such relationships.

Hotel in-room amenities

Hotel in-room amenities are a combination of tangible and intangible stimuli. Most of products and services are not entirely tangible nor intangible. Furthermore, there are substantial efforts of many firms for the tangibilization of an intangible attribute in order to create a physical cue, and at the same time, there are endeavors to intangibilize the tangible products in order to emphasize benefits what customers could receive (Levitt, 1981). With this respect, each hotel in-room amenities do not always have a clear-cut distinction between tangible and intangible amenities. Nonetheless, there are consensus how attributes are classified into tangible and intangible categories according to the extant literature, which suggested that the tangibility can be described as a palpability or materiality of a thing and intangibility equals with impalpability or immateriality (Hellén and Gummerus, 2013; Shostack, 1977).

Tangibility in a guestroom refers to the external appearance of the accommodation facility (Marić *et al.*, 2016), and prior studies emphasized the significance of tangible elements of hotel products (Albayrak *et al.*, 2010; Kucukusta, 2017). Usta *et al.* (2011) tested the quality of the tangible amenities, which include a guest control panel, fire detectors, lights, work space, hair-dryer, and in-room gaming system. Heo and Hyun (2015) conducted the survey to identify the effectiveness of hotel amenities. Their results indicated amenities such as bath supplies and shower booth as the most useful, whereas such amenities as coffee machine, minibar, and bathtub are the least useful amenities. Dev and Kumar (2019) endeavored to identify those hotel amenities that are actually used by customers as they determine the degree of likelihood of customers' return visits. The scholars concluded that there are various tangible amenities that include coffee maker, alarm, desk, lights, closet, bathrobe, and minibar. Also, Chen and

Tussyadiah (2021) indicated kitchen tools, bathroom accessories, and safety equipment as tangible amenities in accommodation establishments.

On the other hand, one of the distinguishing characteristics of hotel industry is intangibility (Fang *et al.*, 2008; Kim, Lee *et al.*, 2019), and there are many intangible in-room amenities which encompass atmosphere, cleanliness, humidity, drainage, scent, sound proofing, and view (Chan, Ma *et al.*, 2021). The degree of intangibility is high for use-oriented services (Schönsleben, 2019), and therefore services that hotels offer in guest room, such as room service and housekeeping service are likely classified in intangible in-room amenities. These invisible elements offer customers a favorable emotional experience, which results in positive post-purchase behavior (Han and Back, 2009). Furthermore, intangible elements in service sector are a source of a competitive edge since they allow service provides to be differentiated from others (Fang *et al.*, 2008; Heo and Hyun, 2015). As such, scholars examined the intangible stimuli in a hotel setting. Suh *et al.* (2015) investigated the ambient conditions of five-star hotels, which includes air quality, music, and noise/sound level, odor/aroma, and temperature. Fuentes-Moraleda *et al.* (2020) discussed atmosphere, comfort, and charm of boutique hotel guestrooms, and their analysis denoted that comfort is the most essential criteria.

The hotel business, which is a customer-centric, must keep up with the changing time, current events, and customer preferences (Chan, Ma *et al.*, 2021). In-room hotel amenities have similarly evolved, and there are novel amenities in responding needs of contemporary customers and social requirements. For instance, multimedia entertainment and other technology-mediated amenities were regarded as luxury a decade ago, but the advancements in these applications resulted in increased customer acceptance, and it is now easily found in hotel guest rooms (Bilgihan *et al.*, 2016). In addition, the recent COVID-19 outbreak has facilitated the growth of

in-room entertaining amenities such as video games and puzzles, and the pandemic generates the more significance of in-room amenities that involve the degree of hygiene, cleanness, safety, and security (Guo *et al.*, 2021; Kim, Han *et al.*, 2021).

Following the approach in the earlier studies (Ding and Keh, 2017; Kim, Lee *et al.*, 2021; Marić *et al.*, 2016), this study involves both tangible and intangible amenities in the guest room for the post-pandemic period. We incorporated a number of in-room amenities that have been examined in the existing research, and categorized them into tangible and intangible amenities. Tangible in-room amenities are composed of food and beverage, spatial environment, convenient appliances, bathroom products, and safety and security. Intangible in-room amenities consist of precautionary measures, entertainment services, general services, and sensory cues.

Customer experience

Customer experience has received considerable attention in recent decades (Becker and Jaakkola, 2020; Kim and Han, 2020). Schmitt (1999) explained that experiences take place as a result of encountering, undergoing, or living through things. The author stated that the consumption is a holistic experience and industry practitioners have shifted attention away from traditional features-and-benefits toward creating customer experiences. Scholars have explicated that customer experience is an individual's responses to particular stimuli, such as servicecape, or stimuli related to the individuals' overall consumption process (O'Cass and Grace, 2004; Rahimian et al., 2021). Berry *et al.* (2002) proposed two categories, which are a set of the clues relating to functionality and a set of the clues concerning the emotions, that make up a customer experience in the service organizations. Likewise, customer experience was described as

cognitive and emotional responses at various touchpoints over time (Lemon and Verhoef, 2016; McColl-Kennedy *et al.*, 2019).

More recently, Becker and Jaakkola (2020) endeavored to develop the essential premises of customer experience that are applicable across contexts and settings, and they conceptualized customer experience as "as non-deliberate, spontaneous responses and reactions to particular stimuli." (p. 637). In the modern service domain, customer experience is frequently treated as a tool to measure customers' evaluation of offerings and their satisfaction (Guan *et al.*, 2021; Xiang *et al.*, 2015). As such, researchers commonly suggested that creating a superior customer experience is a productive way to strengthen the competitiveness of firms (Becker and Jaakkola, 2020). Hotel professionals have also realized the need to generate high value in the form of customer-centric experiences and fostering a distinctive customer experience has become central to hotel practitioners' efforts (Jeong and Kubickova, 2020; Kim and Han, 2020). Moreover, in-room customer experience deserves special emphasis in the with-corona era as customers spend increasing amounts of time in guest rooms during their stay at the hotels (Honeywell Hospitality, 2021).

Brand attitude

Brand attitude is illustrated as "a relative enduring, unidimensional summary evaluation of the brand that presumably energizes behavior" (Spears and Singh 2004, p. 56). Following this notion, brand attitude is often described as a belief about the functional and experiential benefits. Attitude toward a brand reflects consumers' assessment of the brand that includes a set of attributes, and therefore, the attribute perceived as satisfying can be resulted in a favorable attitude toward the brand (Foroudi, 2019). In other words, brand attitude is the result of

cumulated function and benefits of the product-related attributes that make the brand prominent. Moreover, a significant number of studies have contended that brand attitude is linked to consumer behavior, which includes consumers' brand choices and loyalty. For instance, customers that have a positive brand attitude tend to exhibit high intention to purchase the brand, spread good words about it, and are more likely to pay more for it (Ahn and Back, 2018; Liu *et al.*, 2020). Hence, constant reinforcement of brand attitude is one of the most crucial areas of the hotel business.

Brand loyalty

The success of a service firm depends on an ability to attract new customers as well as retain them and make them loyal to its brand (Hwang *et al.*, 2021a). Brand loyalty, which is the determining factor in the development of brand equity, refers the level of commitment to a specific brand in a durable manner in their future behavior, which involves repeat purchasing, and recommending the brand to others (Han *et al.*, 2018). Furthermore, when consumers establish brand loyalty, they tend to become less interested in offerings from other brands, and they are willing to pay more for the brand. Likewise, brand loyalty was conceptualized as "a deeply held commitment to rebuy or re-patronise a preferred product or service consistently in the future, despite situational influences and marketing efforts having potential to cause switching behavior" (Oliver, 1997, p. 392). The significance of brand loyalty lays on the less cost of retaining existing customers than recruiting new customers, and it is undoubtable that brand loyalty plays a vital role in the current fiercely competitive hotel context (Alnawas and Hemsley-Brown, 2019; Rather and Hollebeek, 2019).

Hypotheses development

Effect of different types of in-room amenities on customer experience

Existing studies discuss the role of in-room hotel amenities in creating a customer experience from various aspects (Ben Lahouel and Montargot, 2020; Dev and Kumar, 2019). Jeong and Kubickova (2020) confirmed that the brand and packaging of bathroom amenities affect customer experience, and they then asserted the importance of selecting appealing bathroom amenities. In addition, sensory stimulation has been studied as means to foster a memorable customer experience in the hotel sector (Lee *et al.*, 2018). Over recent years, the more contemporary hotel in-room amenities are examined in customers' evaluation of a hotel. Hoyer *et al.* (2020) illustrated how innovative technologies have a beneficial influence on cognitive, sensory/emotional, and social customer experience, and they accordingly claimed that new technologies would transform the customer experience in the era of digital revolution.

The significant effect of in-room amenities on customer experience is supported by the customer experience theory (Brakus, 2001). Furthermore, Becker and Jaakkola (2020) endeavored to reconcile contradictions in reviewing 136 articles on customer experience. They suggested four essential premises of customer experience, which include offering-related stimuli. This study considers in-room amenities as critical stimuli, which affects customer experience. Meanwhile, a number of studies have adopted a binary approach, which has tangible and intangible elements, in dealing with offerings in the hospitality industry (Kim, Han *et al.*, 2021; Lee *et al.*, 2018; Marić *et al.*, 2016). The stream of these studies indicates that the quality of both tangible and intangible in-room amenities influences customer experience. For instance, Hwang and Seo (2016) explained the importance of a unique concept of products, such as interior design of hotel guest rooms, in order to foster exceptional customer experience. Ren *et al.* (2016)

conducted several interviews to explore the factors that influence customer experience with budget hotels. Their in-depth interviews showed the most frequently mentioned items that include multiple sensorial perceptions, such as cleanliness of the room, cleanliness in the shower room, and quietness. Chittiprolu *et al.* (2021) performed a text mining analysis of customer reviews towards heritage hotels, and they found customers are satisfied with tangible features, which includes room product and physical signifiers, whereas they are dissatisfied with intangible features related to room condition. A stream of these studies denoted the impact of in-room amenities on the customer assessment of a hotel, which formulates a superior customer experience. In the same vein, an offering of an improper kind of amenities adversely affects the guest experience (Dev and Kumar, 2019).

In the age of the COVID-19, recent studies observed how the environment of the current pandemic affects consumer's perception towards various attributes (Chan, Gao *et al.*, 2021; Hong *et al.*, 2021). Yu *et al.* (2021) introduced the emergence of enhanced in-room amenities to combat the spread of coronavirus and examined how these extra features affect customer responses. Chan, Ma *et al.* (2021) compared the determinants of customer experience at luxury hotels over the pandemic based on the user-generated contents. Their findings denoted the core dimensions, which remain the prime role in creating customer experience, and they include the level of service, room quality, and settings. They also revealed that the different level of significance in creating customer experience before and during the pandemic from services, such as delivery services, late check-out, and prevention and control measures. Furthermore, they specifically observed that the relative importance of health measures significantly increased from 0.8 percent pre-pandemic to 3.2 percent amid-pandemic. This implies that the risk perceptions due to the COVID-19 have changed customer responses. Similarly, following the notion of

perceived risk theory, Shin and Kang (2021) determined the perceived health risk associated with the COVID-19 played the significant role in their decision-making processes for a hotel selection. And therefore, there is a likelihood that in-room amenities play an influencing role on customer experience during the COVID-19 incident may not be the same level with that before the COVID-19 outbreak. As a result, the following hypotheses were drafted:

H1a: The quality of tangible in-room amenities has positively affected customer experience before the pandemic.

H1b: The quality of tangible in-room amenities has positively affected customer experience during the pandemic.

H2a: The quality of intangible in-room amenities has positively affected customer experience before the pandemic.

H2b: The quality of intangible in-room amenities has positively affected customer experience during the pandemic.

Effect of customer experience on brand attitude and brand loyalty

Customer experience has a tremendous influence on customer responses, which include their attitude and loyalty toward the brand (Guan *et al.*, 2021; Lemon and Verhoef, 2016). O'Cass and Grace (2004) explored customer experience with a service brand through qualitative and quantitative methods. Then they documented that customer experience are affected by various factors, such as servicescape, and customer experience influences brand attitude. Srivastava and Kaul (2016) examined the effect of customer experience on attitudinal loyalty and behavioral loyalty through revisiting the hierarchical loyalty framework. Their study echoed previous

findings that attitude is shaped by customer experience, and they demonstrated the significance of customer experience management in forming loyalty. Guan *et al.* (2021) determined that individuals with satisfactory experience exhibit more a positive attitude to hotel brands.

Meanwhile, a number of scholars investigated the impact of customer experience on a basis of Pine and Gilmore' (1999) experience economy, and they provided the evidence of the positive influence of experience in leisure and recreation hotel stays on customer loyalty (Ali *et al.*, 2014). Alnawas and Hemsley-Brown (2019) determined that the quality of customer experience is vital antecedent of brand loyalty in the hotel industry. These findings are also in accordance with the prior studies (e.g., Hwang and Seo, 2016) that suggested the significant influence of customer experience on brand-related outcomes in the hospitality and tourism context. At the same time, the consequences of customer experience are likely affected during the COVID-19 pandemic (Chan, Ma *et al.*, 2021; Hong *et al.*, 2021). Based on this backdrop, this study hypothesizes the following statements:

H3a: Customer experience has positively affected brand attitude before the pandemic.

H3b: Customer experience has positively affected brand attitude during the pandemic.

H4a: Customer experience has positively affected brand loyalty before the pandemic.

H4b: Customer experience has positively affected brand loyalty during the pandemic.

Effect of brand attitude on brand loyalty

The attitude-behavior relation that deals with consumer behavior has been extensively studied based on Fishbein and Ajzen's (1980) theory of reasoned action (TRA). As a result, the critical role of brand attitude on the development of brand loyalty has been corroborated by many

academicians (O'Cass and Grace, 2004). Bilgihan *et al.* (2016) provided evidence of how amenities in the guest room affect customer responses, which in turn motivate them to become loyal to the specific hotel brand. Ahn and Back (2018) investigated customers' perception of the integrated resort, and their results found that brand attitude has an important bearing on behavioral intentions. Kim, Kim *et al.* (2019) studied travelers' brand attitude toward the shopping experience, and their analyses revealed that brand attitude increased customer preferences and greater intentions toward a brand. Liu *et al.* (2020) confirmed that customers' perceived brand attitude involving both cognitive and affective aspects towards green restaurant has a beneficial effect on brand loyalty. This research has lent weight to the notion that attitude predicts future behavior, which includes loyalty to a specific brand. It also recognizes the potential difference about the influence level of brand attitude on brand loyalty during the COVID-19 pandemic as the existing literature (e.g., Chan, Ma *et al.*, 2021; Hong *et al.*, 2021) documented changed consumer behavior in the present time. And therefore, the hypotheses as mentioned below are postulated:

H5a: Brand attitude has positively affected brand loyalty before the pandemic.

H5b: Brand attitude has positively affected brand loyalty during the pandemic.

Moderating effect of the COVID-19 pandemic

According to prospect theory proposed by Kahneman and Tversky (1979), consumers make a decision depending on perceived losses, such as service and product malfunction, and perceived gains, such as benefits associated with the offerings, in a risky purchase situation. Consumers are generally willing to pay for a product/service if they believe that the value what they receive is

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greater than or equal to the price they paid for. However, there is always the risk in a typical service encounter that the consumer may discover that the value is less than anticipated (Casidy and Wymer, 2016). With this respect, risk perception associated with the COVID-19 incident potentially makes the difference in customer behavior.

COVID-19 has been regarded as a serious threat to our lives, and the existing studies provide evidence that disaster stress, anxiety, and depression during COVID-19 pandemic acts as a moderator in explicating various consumer behaviors. For instance, Hwang *et al.* (2021b) found that consumers paid greater attention to the functional performance of products particularly after the COVID-19 outbreak and they feel more motivated to use them when they realize more convenience and efficiency. This means that the COVID-19 potentially affects the strength of the effect of the quality of in-room amenities on customer experience such that it would intensify. Pham *et al.* (2020) investigated the moderating effect of increased fear associated with the coronavirus in the path between individuals' perceived benefits and their online shopping activity. Kim, Han *et al.* (2021) stated that consumers prefer contactless services since COVID-19 contributes to increasing risk perception, and they provided evidence that the formation of consumer behavior is moderated by COVID-19. They specifically determined that COVID-19 wears down the strength of well-being during a hotel stay on affective attitude, and they interpreted that it is because of several new regulations applied in hotels due to the pandemic. And therefore, it is reasonable to state that a high perceived risk during the COVID-19 crisis, specifically health risk in this study, will lead the effect of newly emerged intangible in-room amenities on customer experience and its consequences in a different way. Based on this existing knowledge in line with risk perception theory, the hypotheses mentioned below are offered:

H6a: COVID-19 moderates the path between quality of tangible amenities and customer experience.

H6b: COVID-19 moderates the path between quality of intangible amenities and customer experience.

H6c: COVID-19 moderates the path between customer experience and brand attitude.

H6d: COVID-19 moderates the path between customer experience and brand loyalty.

The above discussions outline the theoretical framework of the present research (See Figure 1).

(Insert Figure 1)

Methodology

Development of the measurement items and the survey

This study embraced a variety of in-room amenities, including newly emerged amenities during the COVID-19 era, that are commonly examined in the extant literature. Specifically, we combined the items of in-room amenities that are studied in previous research (e.g., Dev and Kumar, 2019; Ren *et al.,* 2016; Suh *et al.*, 2015; Usta *et al.*, 2011). Accordingly, this study outlined thirty-four amenities consisting of 19 tangible in-room amenities and 15 intangible in-room amenities. In order to assess the quality of each in-room amenity, we developed the statement, "The quality of in-room amenity X in the hotel that I have stayed in is good" to which surveyees responded. The measurement for the rest study constructs were borrowed from

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previous research. Three measurements for customer experience were cited from Kim and Han (2020) and Lemke *et al.* (2011), and another three items to measure brand attitude were adopted from Kim, Kim *et al.* (2019). Brand loyalty was measured by three items borrowed from Han *et al.* (2018) and Suh *et al.* (2015). The initial questionnaires were reviewed by three scholars in academia and three hoteliers, and the questionnaires were then slightly modified to be more accurate and precise.

The first part of the survey began with its purpose and the request for candid responses. The participants were then led to recall their recent hotel experiences through answering the questions, which include the hotel brand, purpose of stay, time of visit, and companion. The second section was structured to estimate the quality of each hotel in-room amenity, customer experience, brand attitude, and brand loyalty before and during the pandemic. In other words, the respondents were asked to evaluate the same set of questionnaires for the two different time period, which is before and during the COVID-19 pandemic. The responses towards all the study measurement items were made in a seven-point Likert-type scale format, "1 = strongly disagree" and "7 = strongly agree". The last section was designed to identify the demographic profiles of the respondents.

Data collection

This study employed an online survey assisted by a company specialized in online research. The company has the total panel size of 1.5 million in South Korea and have strict panel management, such as deregistering the panels who complete the survey inappropriately for three times. Also, the company has a reward program, which incentivizes respondents with redeemable points, and this program helps to encourage an honest answer and genuine opinion. The email invitations

were sent out for the survey and individuals who have experienced same four- or five-star hotel brands before and during the COVID-19 pandemic were only invited to participate the main survey based on the screening questions. Generally, hotels under the same brand are provided with a unified operational manual, and they offer more or less same in-room amenities in order for them to keep the consistency regardless their locations. Furthermore, it is not uncommon that they in the nearby region use the same suppliers in order to get a volume discount, so in-room amenities are quite similar. Therefore, we restricted the responses for the survey to the individuals who have stayed the same branded hotels before and after the pandemic, and it potentially helps for participants' better judgement of hotel in-room amenities and their stay experience over the pandemic.

The data were collected within a week in September 2020. In order for them to recall their experience, we asked them to indicate the month, the length of stay, the purpose of stay, and the companion associated with their hotel experience. In addition, efforts were made to minimize the common method bias. For instance, measurements were borrowed from different sources, independent and dependent constructs were placed in different parts of the survey, and the questions were separated into different question categories. We removed multivariate outliers using the Mahalanobis Distance. As a result, a total of 379 responses were retained for the data analysis, which was performed through SPSS and AMOS program.

Results

Characteristics of the respondents

The details of the respondents' characteristics are exhibited in Table 1. Of 379 responses, 49.6% are male and 50.4% are female. They are at the age of from 20 to 69, which results in an average

age of 44.40. And the majority, 68.1% of the respondents, indicated that they have a bachelor degree. In regards to their occupation, 47.2% are office workers and 11.6% are professionals. When they were asked to indicate their average income, 22.2% stated that they earn below USD 3,000 per month, and 19.0% make between USD 3,000 and USD 3,999.

The survey respondents were asked about the frequency of their hotel stay in year 2019, which was before the pandemic. Of them, 41.7% (158) indicated that they stayed at hotels 3 to 4 times a year and 20.1% (76) stayed at hotels 5 to 6 times a year. In terms of their hotel stay experience during the pandemic, almost half of them, 44.5%, has stayed at hotels in August and July 2020. Concretely, 27.2% and 17.2% respectively, had a hotel stay in these respective months. The month of July and August is generally regarded as the period of summer vacation in South Korea, and this is in line with the results of the purpose of hotel stay in which leisure was accounted for by 83.4%. Among the total participants, 54.4% stated that their stay was at five-star rated hotel, while 45.6% was at four-star rated hotel. The majority of them had reported their length of stay as either one night (43.0%) or two nights (41.4%). And 37.5% indicated that they stayed with partners, and 34.8% stated that they stayed with family.

(Insert Table 1)

Measurement model

This study performed the confirmatory factor analysis in order to evaluate the adequacy of the measurement model (See Table 2). Both results on the basis of the data before and during the pandemic, respectively, revealed that the each model adequately fits the data (before the COVID-19 pandemic: $\chi^2 = 1061.488$, df $= 791$, χ^2/df $= 2.025$, p $< .001$, NFI $= .892$, IFI $= .942$, CFI

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= .942, TLI = .934, and RMSEA = .052 / during the COVID-19 pandemic : $\chi 2$ = 1579.424, df = 791, $\chi 2$/df = 1.997, p < .001, NFI = .894, IFI = .944, CFI = .944, TLI = .936, and RMSEA = .051). Table 1 exhibits the details. The analysis results showed that the factor loading for the data before the COVID-19 pandemic is equal to or above .722 (p < .001) and the factor loading for the data during the COVID-19 pandemic is equal to or above .705 (p < .001). Furthermore, the multicollinearity was evaluated using the values of the variance inflation factor (VIF), which ranged from 1.26 to 5.04 before the pandemic and from 1.87 to 4.79 during the pandemic. They were below the common threshold of 5 to 10, indicating a minimal collinearity, and it accordingly implied that common method bias is not a potential treat in the current study.

(Insert Table 2)

As Table 3 exhibits, convergent validity (CR) values on the basis of the data from before and during the pandemic exceeds the .70, which is the minimum standard. The average variance extracted (AVE) for the data from before the pandemic ranged from .576 to .762, and the AVE values for the data from before the pandemic were from .531 to .754. These values are all bigger than the .50 threshold, which indicates that the convergent validity of all the measurement scales was highly supported. Furthermore, we compared the squared correlation (R^2) between a pair of constructs and found that each squared correlation (R^2) between a pair of constructs was below the AVE for each construct, which confirms the discriminant validity.

(Insert Table 3)

Structural equation model

A structural equation model (SEM) was performed in order to test the relationships among proposed study variables (Table 4-1 before the pandemic & Table 4-2 during the pandemic). The goodness-of-fit statistics before the pandemic, which are $\chi^2 = 2339.548$, df $= 840$, $\chi^2/$df $= 2.785$, $p < .001$, NFI $= .842$, IFI $= .893$, CFI $= .892$, TLI $= .884$, and RMSEA $= .069$, indicated an acceptable level. The goodness-of-fit statistics during the pandemic, which are $\chi^2 = 2350.586$, df $= 840$, $\chi^2/$df $= 2.798$, $p < .001$, NFI $= .843$, IFI $= .893$, CFI $= .893$, TLI $= .885$, and RMSEA $= .069$, were also satisfactory. In an effort to examine the hypotheses, the results showed that only the association between brand attitude and brand loyalty before the COVID-19 pandemic, Hypothesis 5a, was not statistically supported.

(Insert Table 4-1)

(Insert Table 4-2)

Moderating effect of COVID-19

We conducted multiple-group analyses through comparison of the baseline model and nested model in order to validate the COVID-19 pandemic as an influential moderator. As shown in Table 5, the COVID-19 pandemic moderated the path between customer experience and brand attitude (H6d: $\Delta\chi2$ [1] $= 6.506$, and p $< .05$). Precisely, the path coefficient between customer experience and brand attitude was stronger before the COVID-19 pandemic ($\beta = .817$ and t $= 6.248^{**}$) than it was during the pandemic ($\beta = .390$ and t $= 3.955^{**}$). The moderating influence

of the COVID-19 pandemic was not found in the rest associations, and thus Hypotheses 6a, 6b, and 6c were rejected.

(Insert Table 5)

The results of testing proposed hypotheses are exhibited in Figure 2.

(Insert Figure 2)

Discussion and conclusions

Conclusions

This study employed a binary approach towards in-room amenities, and the results indicate how each sub-set of amenities consists of the quality of tangible and intangible in-room amenities. More concretely, the results show that the quality of bathroom products, such as bathrobe, bath supplies, and shower booth, are enduring in-room amenities that are meaningful for travelers regardless the COVID-19 impact. This is in line with earlier studies (e.g., Heo and Hyun, 2015) that claimed the importance of bathroom amenities. The substantial change over the COVID-19 pandemic was found in the general services, precautionary measures, and sensory cues, which categorized in intangible in-room amenities. General services contribute to the quality of intangible in-room amenities much more before than during the pandemic. Precautionary measures and sensory cues accounts for the quality of intangible in-room amenities much more during the pandemic than before the incident. These results are explained by the fact that today's consumers have an exaggerated sense of hygiene (Yu *et al.*, 2021), and spend more time in the

guest room (Honeywell Hospitality, 2021) to avoid exposing themselves to the risk of COVID-19.

In addition, the findings of this study confirmed that stimuli, such as tangible and intangible in-room amenities, offered by the hotel company form customer experience. Above all, the results showed that the salient effect of quality of tangible in-room amenities on customer experience both before and during COVID-19. The results are consistent with earlier studies (e.g., Albayrak *et al.*, 2010), emphasizing that tangible elements have the stronger impact on customer responses than intangible stimuli. Furthermore, the analysis results determined that the effect of tangible amenities on customer experience is greater before the COVID-19 pandemic, whereas the impact of intangible amenities on customer experience is stronger during the pandemic. We attributed this outcome to precautionary measures, which counted heavily during the pandemic.

Our study determined the significant influence of customer experience on brand attitude and brand loyalty, irrespective of the COVID-19 incident. The critical role of customer experience in consumer-brand relation is constantly supported in the existing research (Guan *et al.*, 2021; Srivastava and Kaul, 2016), and the current study documented the same results. Meanwhile, the outcome of this study observed the insignificant impact of brand attitude on brand loyalty before the COVID-19 outbreak, which contradicts previous studies. Indeed, there is ample evidence that brand attitude increases brand loyalty (Hwang *et al.*, 2021a; Liu *et al.*, 2020) and one potential reason for our different finding is that the survey of this study was designed for the participants to assess brand attitude and brand loyalty for two different time periods, before and during the pandemic, respectively, for the same branded hotel. This means that a memory bias impaired the recall of a memory of their attitude before the pandemic since

the participants of the survey were not clearly recognizing when their attitude toward that specific brand was shaped.

The results of multi-group analyses showed that the COVID-19 pandemic moderated the association between customer experience and brand loyalty. Precisely, the results showed that the effect of customer experience on brand loyalty is stronger before the pandemic than during the pandemic. The possible explanation of this observation is that customer experience during the COVID-19 pandemic largely relies on the guest room itself, and its effect on brand loyalty is not highly influential than before. However, contrary to our expectations, the COVID-19 pandemic did not moderate the link between the quality of both tangible and intangible in-room amenities and customer experience. This result is somewhat coherent with Chan, Ma et al. (2021) that found room quality and settings consistently played the critical role in creating a customer experience regardless the pandemic impact. Also, it is supported by the study conducted by Hong *et al.* (2021), which confirmed the insignificant moderating influence of the COVID-19 pandemic in shaping the customer behavior in the hospitality industry. Our findings accented the value of in-room amenities in the creation of positive customer experience regardless the pandemic.

Theoretical contribution

In order to find a direction for the sustainable development of the hotel industry in light of the COVID-19 pandemic, it is crucial to understand how differently consumers perceive the offerings and its influence on the formation of consumer behavior over the period. Nonetheless, academic efforts to examine the effectiveness of hotel commitment to offer an ideal set of in-room amenities considering the disruptive external environment, specifically the COVID-19, are

seldom made. The present study successfully tested the change of consumers' perception towards hotel in-room amenities and its consequence in the formation of brand loyalty over the pandemic, which have not been answered by the existing literature. Hence, this study fills the relevant gaps in the current literature. In addition, this study provides an overarching theoretical scheme that successfully addressed the research questions.

This research proposed a theoretical framework based on the customer experience theory in determining the role of in-room amenities in the creation of customer experience. The findings observed that the quality of both tangible and intangible in-room amenities increased customer experience. A number of studies have adopted the binary approach, which involves tangible and intangible elements, in dealing with offerings in the hospitality industry (Kim, Han *et al.*, 2021; Marić *et al.*, 2016). However, there is no consensus of the relative importance between tangible and intangible stimuli. For instance, Ding and Keh (2017) observed that consumers place greater value on intangible components in their evaluation of service performance under a high construal level, whereas consumers weigh more importance on tangible elements in their assessment under a low construal level. Our study is among the first to provide evidence of relative importance of tangible and intangible in-room amenities on customer experience in the hotel context. Moreover, the significant influence of customer experience on brand attitude and brand loyalty was discovered, and the results support the customer experience theory as well.

Amenities should be revisited to constantly exceed customer expectation if hotel professionals aim for better performance. To date, no attempts were made in order to examine how consumer responses toward in-room amenities and its influence on customer experience have changed over the pandemic. Furthermore, the earlier studies do not sufficiently advance our knowledge if the pandemic amplifies or diminishes the relationship among in-room amenities,

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customer experience, and its brand-related outcomes from customers' viewpoint. With this respect, this study drew on the theory of risk perception, which broadens the range of studies pertaining the COVID-19 impact in the hotel establishment. Precisely, this study supported the application of the risk perception theory in explaining the changed customer responses before and during the COVID-19 with empirical evidence in the hotel context.

Managerial implications

The right mixture of hotel in-room amenities will increase positive customer responses and avoid any unnecessary investments of hotel operators. Based on the empirical evidence, the findings of this study should guide hotel professionals to be more selective in the management of appropriate in-room amenity. First of all, the present research underlined the significance of tangible in-room amenities in the creation of positive customer experience, which in turn cultivates brand loyalty without reference to the pandemic. Hence, it is suggested hoteliers paying attention on the appearance and form of in-room amenities that involve food & beverage, spatial environment, convenient appliances, and safety & security. Moreover, the quality maintenance of these tangible in-room amenities is of great importance.

In the aftermath of COVID-19, protective amenities have become a prime focus of recent lodging industry initiative to combat the spread of the coronavirus (Hao and Chon, 2020; Yacoub and ElHajjar, 2021). For instance, Yu *et al.* (2021) particularly explained some of best practices related to hygiene and upgraded cleaning facilities using disinfectants. They observed how customers perceive the importance of these new amenities. The analysis results of this study denoted the increased meaning of precautionary measures during the pandemic and validated that the hotels' current initiatives against the COVID-19 are adequate for customer experience. In

order to cater for the growing concerns of health, hotel professionals should continue seeking for ways to minimize the risks and maximize their wellness elements through additional resources on in-room offerings that can enhance protective measures.

In the meantime, hoteliers should also constantly pay attention to in-room amenities that remain essential, irrespective of the pandemic. This means that hotel practitioners should ensure their bathroom amenities are up-to-date, exceeding customer expectations. Moreover, hotel operators should recognize that guests generally remain inside their hotel rooms throughout the day during the pandemic (Honeywell Hospitality, 2021), and thus, hotels are recommended to provide more optional in-room amenities for customers, so they can enjoy their guest rooms. One of the known global chain hotels' recent announcement offering Netflix, a streaming service for a wide variety of TV shows and movies, is an example of entertainment enhancement of guestroom (Dev and Kumar, 2019). Likewise, this study suggests that hotel entrepreneurs make proactive efforts to develop various options that guest can enjoy in their rooms. As such, hoteliers could consider embracing innovative technology-mediated amenities as part of the enhancement of the in-room amenity selection.

Nonetheless, the deployment of a wide range of in-room amenities has not always resulted in positive assessment from customers (Bilgihan *et al.*, 2016), and it is crucial to determine the right assortment of hotel in-room amenities to enhance the customer experience. The provision of new amenities in the guest room means additional operating costs (Dev and Kumar, 2019). Considering the economic impact of in-room amenities, it is also important for hotel professionals to identify unnecessary amenities and reduce expenses to counterbalance the increase in the cost of new items such as protective and entertainment amenities. Specifically, the findings of this study imply less importance of tangible in-room amenities in creating customer

experience during the pandemic, and it is recommended for hotels to monitor unused items to potentially stop offering them in the guest room. Alternatively, in consideration of the diversity of customers, hotels may be equipped with various in-room amenities and provide them upon request.

Limitations and future research

Several limitations should be addressed for the future research opportunities. Earlier research indicates that hotel amenities are evaluated differently according to the demographic profile, customer segmentation, and hotel type. For example, business and leisure travelers assess hotel in-room amenities differently, and guest evaluations toward in-room amenities vary from a city hotel to a resort hotel. Future studies may extend the current research by considering characteristics of travelers, customer segment, and hotel category. Second, we had an assumption that four- or five-star hotels provide all of in-room amenities, which we adopted in our study. However, the amenities offered in each hotel are different (Kucukusta, 2017) and these full-service hotels are not necessarily offering all of them. Hence, it is recommended to ensure the availability of in-room amenity prior to assessing its quality. Lastly, this study suggests a longitudinal analysis to avoid any memory bias and further validate our findings in the future research.

References

Ahn, J. and Back, K. J. (2018), "Beyond gambling: Mediating roles of brand experience and attitude", *International Journal of Contemporary Hospitality Management,* Vol. 30 No. 10, pp. 3026-3039.

Albayrak, T., Caber, M. and Aksoy, S. (2010), "Relationships of the tangible and iIntangible elements of tourism products with overall customer satisfaction", *International Journal of Trade, Economics and Finance,* Vol. 1 No. 2, pp. 140.

Ali, F., Hussain, K. and Ragavan, N. A. (2014), "Memorable customer experience: Examining the effects of customers experience on memories and loyalty in Malaysian resort hotels", *Procedia-Social and Behavioral Sciences,* Vol. 144, pp. 273-279.

Alnawas, I. and Hemsley-Brown, J. (2019), "Examining the key dimensions of customer experience quality in the hotel industry", *Journal of Hospitality Marketing & Management,* Vol. 28 No. 7, pp. 833-861.

Becker, L. and Jaakkola, E. (2020), "Customer experience: fundamental premises and implications for research", *Journal of the Academy of Marketing Science,* Vol. 48 No. 4, pp. 630-648.

Ben Lahouel, B. and Montargot, N. (2020), "Children as customers in luxury hotels: What are Parisian hotel managers doing to create a memorable experience for children?", *International Journal of Contemporary Hospitality Management*, Vol. 32 No. 5, pp. 1813-1835.

Berry, L. L., Carbone, L. P. and Haeckel, S. H. (2002), "Managing the total customer experience", *MIT Sloan Management Review,* Vol. 43 No. 3, pp. 85-89.

Bilgihan, A., Smith, S., Ricci, P. and Bujisic, M. (2016), "Hotel guest preferences of in-room technology amenities", *Journal of Hospitality and Tourism Technology,* Vol. 7 No. 2, pp. 118-134.

Blank, D. (2003), "Selecting in-room amenities requires careful research", *Hotel & Motel Management,* Vol. 218 No. 12, pp. 30-30.

Brakus, J. (2001), "A theory of consumer experiences", unpublished doctoral dissertation, Columbia University, New York, NY.

Casidy, R. and Wymer, W. (2016), "A risk worth taking: Perceived risk as moderator of satisfaction, loyalty, and willingness-to-pay premium price", *Journal of Retailing and Consumer Services,* Vol. 32, pp. 189-197.

Chan, I. C. C., Ma, J., Ye, H. and Law, R. (2021), "A comparison of hotel guest experience before and during pandemic: Evidence from online reviews", *In Information and Communication Technologies in Tourism 2021* (pp. 549-556). Springer, Cham.

Chan, J., Gao, Y.(L). and McGinley, S. (2021), "Updates in service standards in hotels: how COVID-19 changed operations", *International Journal of Contemporary Hospitality Management,* Vol. 33 No. 5, pp. 1668-1687.

Chen, Y., and Tussyadiah, I. (2021), "Service failure in peer-to-peer accommodation." *Annals of Tourism Research,* Vol. 88, pp. 103156.

Chittiprolu, V., Samala, N. and Bellamkonda, R. S. (2021), "Heritage hotels and customer experience: A text mining analysis of online reviews", *International Journal of Culture, Tourism and Hospitality Research,* Vol. 15 No. 2, pp. 131-156.

Davari, D., Vayghan, S., Jang, S.(S). and Erdem, M. (2022), "Hotel experiences during the COVID-19 pandemic: high-touch versus high-tech", *International Journal of Contemporary Hospitality Management*, Vol. 34 No. 4, pp. 1312-1330.

Ding, Y. and Keh, H. T. (2017), "Consumer reliance on intangible versus tangible attributes in service evaluation: The role of construal level", *Journal of the Academy of Marketing Science,* Vol. 45 No. 6, pp. 848-865.

Dev, C. S. and Kumar, P. (2019), "A detailed study of the expected and actual use of hotel amenities", *Boston Hospitality Review,* Vol. 20, pp. 1-22.

Fang, E., Palmatier, R. W. and Steenkamp, J. B. E. (2008), "Effect of service transition strategies on firm value", *Journal of Marketing,* Vol. 72 No. 5, pp. 1-14.

Fishbein, M. and Ajzen, I. (1980), *Predicting and understanding consumer behavior: Attitude-behavior correspondence.* In Ajzen, I. & Fishbein, M. (eds.). Understanding Attitudes and Predicting Social Behavior (pp. 148-172). Englewood Cliffs, NJ: Prentice Hall.

Fang, E., Palmatier, R. W. and Steenkamp, J. B. E. M. (2008), "Effect of service transition strategies on firm value", *Journal of Marketing,* Vol. 72, pp. 1–14.

Foroudi, P. (2019), "Influence of brand signature, brand awareness, brand attitude, brand reputation on hotel industry's brand performance", *International Journal of Hospitality Management,* Vol. 76, pp. 271-285.

Fuentes-Moraleda, L., Villacé-Molinero, T., Lafuente-Ibáñez, C. and Muñoz-Mazón, A. (2020), "Do the managers of boutique hotels value their tangible and intangible attributes in the same way as their guests?", *International Journal of Management Practice,* Vol. 13 No. 5, pp. 521-546.

Guan, J., Wang, W., Guo, Z., Chan, J. H. and Qi, X. (2021), "Customer experience and brand loyalty in the full-service hotel sector: The role of brand affect", *International Journal of Contemporary Hospitality Management,* Vol. 33 No. 5, pp. 1620-1645.

Guo, L., Liu, K., Song, Y. and Yang, Z. (2021), "Recovering hotel room sales during the COVID-19 pandemic: Lessons from OTA information using the quantile regression approach", *Current Issues in Tourism*, pp. 1-21.

Han, H., Nguyen, H. N., Song, H., Chua, B. L., Lee, S. and Kim, W. (2018), "Drivers of brand loyalty in the chain coffee shop industry", *International Journal of Hospitality Management,* Vol. 72, pp. 86-97.

Han, H., Yu, J., Chua, B., Lee, S. and Kim, W. (2019), "Impact of core-product and service-encounter quality, attitude, image, trust, and love on repurchase: Full-service vs. low-cost carriers in South Korea", *International Journal of Contemporary Hospitality Management*, Vol. 31 No. 4, pp. 1588-1608

Hao, F. and Chon, K.K.-S. (2022), "Contactless service in hospitality: bridging customer equity, experience, delight, satisfaction, and trust", *International Journal of Contemporary Hospitality Management*, Vol. 34 No. 1, pp. 113-134.

Hellén, K. and Gummerus, J. (2013), "Re-investigating the nature of tangibility/intangibility and its influence on consumer experiences", *Journal of Service Management*, Vol. 24 No. 2, pp. 130-150.

Heo, C. Y. and Hyun, S. S. (2015), "Do luxury room amenities affect guests' willingness to pay?", *International Journal of Hospitality Management,* Vol. 46, pp. 161-168.

Honeywell Hospitality (2021), How the pandemic altered hotel guest behaviors and room occupancy patterns. Retrieved from https://www.inncom.com/images/whitepapers/Hotel_Guest_Room_Occupancy_Patterns_Case_Study_May_2021.pdf

Hong, C., Choi, H. H., Choi, E. K. C. and Joung, H. W. D. (2021), "Factors affecting customer intention to use online food delivery services before and during the COVID-19 pandemic", *Journal of Hospitality and Tourism Management,* Vol. 48, pp. 509-518.

Hoyer, W. D., Kroschke, M., Schmitt, B., Kraume, K. and Shankar, V. (2020), "Transforming the customer experience through new technologies", *Journal of Interactive Marketing,* Vol. 51, pp. 57-71.

Hwang, J., Choe, J. Y. J., Kim, H. M. and Kim, J. J. (2021a), "Human baristas and robot baristas: How does brand experience affect brand satisfaction, brand attitude, brand attachment, and brand loyalty?", *International Journal of Hospitality Management,* Vol. 99, 103050.

Hwang, J., Choe, J. Y., Choi, Y. G., & Kim, J. J. (2021b). A comparative study on the motivated consumer innovativeness of drone food delivery services before and after the outbreak of COVID-19. *Journal of Travel & Tourism Marketing,* Vol. 38, No. 4, pp. 368-382.

Hwang, J. and Seo, S. (2016), "A critical review of research on customer experience management: Theoretical, methodological and cultural perspectives", *International Journal of Contemporary Hospitality Management,* Vol. 28 No. 10, pp. 2218-2246

Jeong, M. and Kubickova, M. (2020), "Do the brand and packaging matter? The case of hotel bathroom amenities", *Journal of Hospitality and Tourism Insights*, Vol. 4 No. 5, pp. 565-581.

Jiang, Y. and Wen, J. (2020), "Effects of COVID-19 on hotel marketing and management: a perspective article", *International Journal of Contemporary Hospitality Management*, Vol. 32 No. 8, pp. 2563-2573.

Kahneman, D. and Tversky, A. (1979), "Prospect theory: An analysis of decision under risk", *Econometrica,* Vol. 47 No. 2, pp. 363-391.

Kandampully, J., Zhang, T. C. and Jaakkola, E. (2018), "Customer experience management in hospitality: A literature synthesis, new understanding and research agenda", *International Journal of Contemporary Hospitality Management*, Vol. 30 No. 1, pp. 21-56.

Kim, E. J., Baloglu, S. and Henthorne, T. L. (2021), "Signaling effects of branded amenities on customer-based brand equity", *Journal of Hospitality Marketing & Management,* Vol. 30 No. 4, pp. 508-527.

Kim, H., Kim, J. J. and Asif, M. (2019), "The antecedents and consequences of travelers' well-being perceptions: Focusing on chinese tourist shopping at a duty free", *International Journal of Environmental Research and Public Health,* Vol. 16 No. 24, pp. 5081.

Kim, J. J., Han, H. and Ariza-Montes, A. (2021), "The impact of hotel attributes, well-being perception, and attitudes on brand loyalty: Examining the moderating role of COVID-19 pandemic", *Journal of Retailing and Consumer Services,* Vol. 62, pp. 102634.

Kim, J. J. and Han, H. (2020), "Hotel of the future: Exploring the attributes of a smart hotel adopting a mixed-methods approach", *Journal of Travel & Tourism Marketing,* Vol. 37 No. 7, pp. 804-822.

Kim, J. J., Lee, Y. and Han, H. (2019), "Exploring competitive hotel selection attributes among guests: An importance-performance analysis", *Journal of Travel & Tourism Marketing,* Vol. 36 No. 9, pp. 998-1011.

Kucukusta, D. (2017), "Chinese travelers' preferences for hotel amenities." *International Journal of Contemporary Hospitality Management*, Vol. 29 No. 7, pp. 156-1976.

Lai, I. K. W. and Wong, J. W. C. (2020), "Comparing crisis management practices in the hotel industry between initial and pandemic stages of COVID-19." *International Journal of Contemporary Hospitality Management,* Vol. 32 No. 10, pp. 3135-3156.

Lee, S., Jeong, M. and Oh, H. (2018), "Enhancing customers' positive responses: Applying sensory marketing to the hotel website", *Journal of Global Scholars of Marketing Science,* Vol. 28 No. 1, pp. 68-85.

Lemke, F., Clark, M. and Wilson, H. (2011), "Customer experience quality: An exploration in business and consumer contexts using repertory grid technique", *Journal of the Academy of Marketing Science,* Vol. 39 No. 6, pp. 846–869.

Lemon, K. N. and Verhoef, P. C. (2016), "Understanding customer experience throughout the customer journey", *Journal of Marketing,* Vol. 80 No. 6, pp. 69-96.

Liu, K. N., Hu, C., Lin, M. C., Tsai, T. I. and Xiao, Q. (2020), "Brand knowledge and non-financial brand performance in the green restaurants: Mediating effect of brand attitude", *International Journal of Hospitality Management,* Vol. 89, pp. 102566.

Marić, D., Marinković, V., Marić, R. and Dimitrovski, D. (2016), "Analysis of tangible and intangible hotel service quality components", *Industrija,* Vol. 44 No. 1, pp. 7-25.

McColl-Kennedy, J. R., Zaki, M., Lemon, K. N., Urmetzer, F. and Neely, A. (2019), "Gaining customer experience insights that matter", *Journal of Service Research,* Vol. 22 No. 1, pp. 8-26.

O'Cass, A. and Grace, D. (2004), "Exploring consumer experiences with a service brand", *Journal of Product & Brand Management,* Vol. 13 No. 4, pp. 257-268.

Oliver, R. L. (1997), *Satisfaction: A behavioral perspective on the consumer.* New York: McGraw-Hill.

Park, H., Lee, M. and Back, K.-J. (2021), "Exploring the roles of hotel wellness attributes in customer satisfaction and dissatisfaction: application of Kano model through mixed methods", *International Journal of Contemporary Hospitality Management*, Vol. 33 No. 1, pp. 263-285.

Pham, V. K., Do Thi, T. H. and Ha Le, T. H. (2020), "A study on the COVID-19 awareness affecting the consumer perceived benefits of online shopping in Vietnam", *Cogent Business & Management,* Vol. 7 No. 1, pp. 1846882.

Pine, J. and Gilmore, J. (1999), *The Experience Economy,* Harvard Business School Press, Boston, 1999.

Rahimian, S., ShamiZanjani, M., Manian, A. and Esfidani, M.R. (2021), "A framework of customer experience management for hotel industry", *International Journal of Contemporary Hospitality Management,* Vol. 33 No. 5, pp. 1413-1436.

Rather, R. A. and Hollebeek, L. D. (2019), "Exploring and validating social identification and social exchange-based drivers of hospitality customer loyalty", *International Journal of Contemporary Hospitality Management,* Vol. 31 No. 3, pp. 1432-1451.

Ren, L., Qiu, H., Wang, P., and Lin, P.M. (2016), "Exploring customer experience with budget hotels: Dimensionality and satisfaction." *International Journal of Hospitality Management,* Vol. 52, pp. 13-23.

Schmitt, B. (1999). Experiential marketing. *Journal of Marketing Management,* Vol. 15 No. 1-3, pp. 53-67.

Schmitt, B., Brakus, J. and Zarantonello, J. (2015), "From experiential psychology to consumer experience", *Journal of Consumer Psychology,* Vol. 25 No. 1, pp. 166-171.

Schönsleben, P. (2019), "Tangible services and intangible products in industrial product service systems." *Procedia CIRP* Vol. 83, pp. 28-31.

Shin, H., & Kang, J. (2020). Reducing perceived health risk to attract hotel customers in the COVID-19 pandemic era: Focused on technology innovation for social distancing and cleanliness. *International Journal of Hospitality Management,* Vol. 91, 102664.

Spears, N. and Singh, S. N. (2004), "Measuring attitude toward the brand and purchase intentions", *Journal of Current Issues & Research in Advertising,* Vol. 26 No. 2, pp. 53-66.

Srivastava, M. and Kaul, D. (2016), "Exploring the link between customer experience–loyalty– consumer spend", *Journal of Retailing and Consumer Services,* Vol. 31, pp. 277-286.

Suh, M., Moon, H., Han, H. and Ham, S. (2015), "Invisible and intangible, but undeniable: Role of ambient conditions in building hotel guests' loyalty", *Journal of Hospitality Marketing & Management,* Vol. 24 No. 7, pp. 727-753.

Tamwatin, U., Trimetsoontorn, J. and Fongsuwan, W. (2015), "The effect of tangible and intangible service quality on customer satisfaction and customer loyalty: A SEM approach towards a five-star hotel in Thailand", *Journal for Global Business Advancement,* Vol. 8 No. 4, pp. 399-419.

Usta, M., Berezina, K. and Cobanoglu, C. (2011), The impact of hotel attributes' satisfaction on overall guest satisfaction, Scholarworks @UMass Amherst. https://scholarworks.umass.edu/gradco nf_hospitality/2011/Presentation/5/

Xiang, Z., Schwartz, Z., Gerdes Jr, J. H. and Uysal, M. (2015), "What can big data and text analytics tell us about hotel guest experience and satisfaction?", *International Journal of Hospitality Management,* Vol. 44, pp. 120-130.

Yacoub, L. and ElHajjar, S. (2021), "How do hotels in developing countries manage the impact of COVID-19? The case of Lebanese hotels", *International Journal of Contemporary Hospitality Management*, Vol. 33 No. 3, pp. 929-948.

Yu, J., Seo, J. and Hyun, S. S. (2021), "Perceived hygiene attributes in the hotel industry: customer retention amid the COVID-19 crisis", *International Journal of Hospitality Management,* Vol. 93, pp. 102768.

Zarezadeh, Z.Z., Rastegar, R. and Xiang, Z. (2022), "Big data analytics and hotel guest experience: a critical analysis of the literature", *International Journal of Contemporary Hospitality Management*, Vol. 34 No. 6, pp. 2320-2336.

Table 1. Demographic characteristics and their hotel stay experience (*n* =379)

	Variable	*n*	Percentage
	Gender		
	Male	188	49.5
	Female	191	50.4
	Age		
	20s	70	4.8
	30s	75	19.8
	40s	79	20.8
	50s	84	22.2
	60s	71	18.7
	Education level		
	Below high school	4	1.1
	High school diploma	37	9.8
	Associate's degree	32	8.4
	Bachelor's degree	258	68.1
	Graduate degree	48	12.7
	Monthly household income		
Demographic profile	$9,001 and over	42	11.1
	$8,001-$9,000	30	7.9
	$7,001-$8,000	27	7.1
	$6,001-$7,000	37	9.8
	$5,001-$6,000	47	12.4
	$4,001-$5,000	40	10.6
	$3,001-$4,000	72	19.0
	Under $3,000	84	22.2
	Occupation		
	Professional	44	11.6
	Office worker	179	47.2
	Service personnel	14	3.7
	Sales	10	2.6
	Technical post	17	4.5
	Student	14	3.7
	Housewife	35	9.2
	Self-employed	30	7.9
	Freelancer	11	2.9
	Others	25	6.6
	Frequency of hotel stays (before the pandemic)		
	Once to twice	84	22.2
	Three times to four times	158	41.7
	Five times to six times	76	20.1
	Seven times to eight times	20	5.3
Hotel stay experience	Nine times to ten times	15	4.0
	Eleven times and more	26	6.9
	Month of hotel stays (during the pandemic)		
	September 2020	18	4.7
	August 2020	103	27.2
	July 2020	65	17.2
	June 2020	29	7.7
	May 2020	56	14.8

April 2020	16	4.2
March 2020	24	6.3
February 2020	37	9.8
January 2020	31	8.2
Purpose of hotel stays (during the pandemic)		
Business	60	15.8
Leisure	316	83.4
Hotel category (during the pandemic)		
Five-star rated hotel	206	54.4
Four-star rated hotel	173	45.6
Length of stay (during the pandemic)		
One night two days	163	43.0
Two nights three days	157	41.4
Three nights four days	36	9.5
Four nights five days	9	2.4
Five nights six days	9	2.4
Six nights seven days, and above	5	1.3
Companions (during the pandemic)		
Alone	57	15.0
Partners/Spouses	142	37.5
Family members	132	34.8
Friends	47	12.4
Others	1	0.3

Table 2. Results of confirmatory factor analysis: Items and loadings

Category	Construct and scale item	Standardized loading[a]	
		Before the pandemic	During the pandemic
	Food & Beverage		
	Coffee/Tea machine	.776	.819
	Minibar	.826	.838
	Utensils	.813	.851
	Spatial environment		
	Interior	.821	.830
	Layout	.839	.852
	Furniture	.770	.854
	Convenient appliances		
	Dressing table	.784	.786
	Desk	.859	.825
Tangible	Sofa	.823	.815
in-room	Closet and hangers	.840	.806
amenities	Lights	.722	.771
	Bathroom products		
	Bathrobe	.783	.798
	Bathtub	.799	.751
	Bath supplies	.841	.778
	Beauty supplies	.793	.738
	Shower booth	.824	.852
	Safety & Security		
	Fire detector	.903	.909
	Emergency light/Evacuation map	.927	.912
	Door lock	.863	.872
	Precautionary measures		
	Mandated facial/hand masks (employees entering a room)	.952	.819
	Contactless service	.807	.821
	Limited access (employees entering a room)	.867	.846
	Entertainment services		
	Movie	.819	.832
	Music	.808	.866
	Digital media (e.g. provision of weather and events)	.805	.705
Intangible	**General services**		
in-room	Room service	.851	.833
amenities	Laundry service	.816	.811
	Housekeeping service	.811	.819
	Sensory cues		
	View	.758	.767
	Temperature	.814	.783
	Brightness	.801	.802
	Soundproof	.787	.807
	Water pressure	.796	.796
	Drainage	.793	.823
Customer experience			
	I have had a pleasant experience with this hotel brand.	.877	.902
	I have had memorable experiences at this hotel brand.	.869	.869
	I have had many good memories with this hotel brand.	.793	.807
Brand attitude			
	This hotel brand is worthy.	.846	.861
	I like staying at this hotel brand.	.856	.894
	I enjoy staying at this hotel brand.	.887	.869

Brand loyalty

I would like to revisit this hotel brand in the future.	.910	.909
I am willing to visit this hotel brand again.	.889	.903
I would say good things about this hotel brand to others.	.838	.847

Goodness-of-fit statistics (before the COVID-19 pandemic): $\chi^2 = 1061.488$, df = 791, $\chi^2/df = 2.025$, $p < .001$, NFI = .892, IFI = .942, CFI = .942, TLI = .934, and RMSEA = .052

Goodness-of-fit statistics (during the COVID-19 pandemic): $\chi^2 = 1579.424$, df = 791, $\chi^2/df = 1.997$, $p < .001$, NFI = .894, IFI = .944, CFI = .944, TLI = .936, and RMSEA = .051

Notes 1. [a] All factors loadings are significant at $p < .001$

Notes 2. NFI = normed fit index, IFI = incremental fit index, CFI = comparative fit index, TLI = Tucker-Lewis index, and RMSEA = root mean square error of approximation

Table 3. Results of measurement model: Correlations, AVE, CR, mean, and SD

Constructs	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	CR (AVE)	Mean (SD)
(1) FB	1.000	.638[a]	.708	.701	.624	.339	.598	.684	.672	.626	.620	.652	.810 (.588)	5.3175 (.9946)
		.634[a]	**.696**	**.698**	**.631**	**.495**	**.616**	**.668**	**.687**	**.601**	**.573**	**.553**	**.824 (.610)**	**5.3395 (1.0939)**
(2) SE	.407[b]	1.000	.733	.713	.598	.292	.553	.595	.775	.624	.605	.641	.847 (.650)	5.3087 (.8912)
	.402[b]		**.723**	**.706**	**.576**	**.450**	**.585**	**.564**	**.776**	**.574**	**.514**	**.497**	**.865 (.680)**	**5.3456 (.9791)**
(3) CA	.501	.537	1.000	.771	.649	.263	.616	.708	.745	.624	.626	.664	.885 (.606)	5.2933 (.9207)
	.484	**.523**		**.750**	**.661**	**.493**	**.646**	**.694**	**.750**	**.582**	**.595**	**.554**	**.863 (.558)**	**5.3185 (.9942)**
(4) BP	.491	.508	.594	1.000	.655	.295	.547	.661	.820	.661	.664	.654	.883 (.601)	5.4691 (.9507)
	.487	**.498**	**.563**		**.670**	**.474**	**.594**	**.639**	**.804**	**.572**	**.574**	**.534**	**.851 (.534)**	**5.5224 (.9888)**
(5) SS	.389	.358	.421	.429	1.000	.280	.502	.645	.729	.621	.653	.639	.905 (.762)	5.6332 (1.0616)
	.398	**.332**	**.437**	**.449**		**.640**	**.577**	**.666**	**.722**	**.579**	**.590**	**.534**	**.902 (.754)**	**5.7027 (1.0906)**
(6) PM	.115	.085	.069	.087	.078	1.000	.393	.281	.242	.265	.304	.292	.820 (.604)	4.6895 (1.4007)
	.245	**.203**	**.243**	**.225**	**.410**		**.500**	**.514**	**.554**	**.536**	**.582**	**.508**	**.840 (.637)**	**6.0836 (.9969)**
(7) ES	.358	.306	.379	.299	.252	.154	1.000	.702	.565	.511	.527	.524	.803 (.576)	5.0695 (1.0184)
	.379	**.342**	**.417**	**.353**	**.333**	**.250**		**.701**	**.618**	**.515**	**.512**	**.460**	**.771 (.531)**	**5.1803 (1.0957)**
(8) GS	.468	.354	.501	.437	.416	.079	.493	1.000	.655	.591	.633	.622	.837 (.632)	5.2172 (.9926)
	.446	**.318**	**.482**	**.408**	**.444**	**.264**	**.491**		**.643**	**.532**	**.551**	**.500**	**.808 (.585)**	**5.2832 (1.0738)**
(9) SC	.452	.601	.555	.672	.531	.059	.319	.429	1.000	.658	.682	.681	.895 (.586)	5.5485 (.9016)
	.472	**.602**	**.563**	**.646**	**.521**	**.307**	**.382**	**.413**		**.611**	**.576**	**.537**	**.896 (.590)**	**5.6910 (.9074)**
(10) CX	.392	.389	.389	.437	.386	.070	.261	.349	.433	1.000	.800	.829	.872 (.694)	5.5365 (.9525)
	.361	**.329**	**.339**	**.327**	**.335**	**.287**	**.265**	**.283**	**.373**		**.811**	**.788**	**.868 (.687)**	**5.5057 (1.0251)**
(11) BA	.384	.366	.392	.441	.426	.092	.278	.401	.465	.640	1.000	.807	.893 (.735)	5.5770 (.9357)
	.328	**.264**	**.354**	**.329**	**.348**	**.339**	**.262**	**.304**	**.332**	**.658**		**.807**	**.893 (.735)**	**5.6271 (.9970)**
(12) BL	.425	.411	.441	.428	.408	.085	.275	.387	.464	.687	.786	1.000	.903 (.757)	5.6069 (.9644)
	.306	**.247**	**.307**	**.285**	**.285**	**.258**	**.212**	**.250**	**.288**	**.621**	**.651**		**.888 (.726)**	**5.5937 (1.0858)**

Note1.FB = food & beverage; SE = spatial environment; CA = convenient appliances; BP = bathroom products; SS = safety & security; PM = precautionary measures; ES = entertainment services; GS = general services; SC = sensory cues; CE = customer experience; BA = brand attitude; BL = brand loyalty

Note 2. The unmarked values are for before the outbreak of COVID-19; Values in boldface type are after the outbreak of COVID-19

Note 3. [a] Correlations are above the diagonal, [b] Squared correlations are below the diagonal

Table 4-1. Results of structural model evaluation and hypotheses testing: Before the pandemic

	Independent variable		Dependent variable	β	t-value	Status
H1a	Tangible in-room amenities	→	Customer experience	.756	12.912**	Supported
H2a	Intangible in-room amenities	→	Customer experience	.235	5.392**	Supported
H3a	Customer experience	→	Brand attitude	.903	16.543**	Supported
H4a	Customer experience	→	Brand loyalty	.795	6.703**	Supported
H5a	Brand attitude	→	Brand loyalty	.139	1.218	Not supported

Goodness-of-fit statistics: χ^2 = 2339.548, df = 840, χ^2/df = 2.785, p < .001, NFI = .842, IFI = .893, CFI = .892, TLI = .884, and RMSEA = .069
Total variance explained (R^2): R^2 for customer experience = .626; R^2 for brand attitude = .815; R^2 for brand loyalty = .850

Note. **p < .001.

Table 4-2. Results of structural model evaluation and hypotheses testing: During the pandemic

	Independent variable		Dependent variable	β	t-value	Status
H1b	Tangible in-room amenities	→	Customer experience	.543	10.032**	Supported
H2b	Intangible in-room amenities	→	Customer experience	.388	7.236**	Supported
H3b	Customer experience	→	Brand attitude	.887	17.092**	Supported
H4b	Customer experience	→	Brand loyalty	.425	4.042**	Supported
H5b	Brand attitude	→	Brand loyalty	.471	4.476**	Supported

statistics: χ^2 = 2350.586, df = 840, χ^2/df = 2.798, p < .001, NFI = .843, IFI = .893, CFI = .893, TLI = .885, and RMSEA = .069
Total variance explained (R^2): R^2 for customer experience = .445; R^2 for brand attitude = .788; R^2 for brand loyalty = .758

Note. **p < .001.

Table 5. Results of moderating effect of the COVID-19 pandemic

	Linkages		Before the pandemic		During the pandemic		Baseline model (freely estimated)	Nested model (equally constrained)
			β	t-values	β	t-values		
H6a	Tangible in-room amenities	→ Customer experience	.765	12.872**	.548	10.160**	$\chi^2(1690) = 5016.118$	$\chi^2(1691) = 5018.595^a$
H6b	Intangible in-room amenities	→ Customer experience	.222	5.178**	.369	7.006**	$\chi^2(1690) = 5016.118$	$\chi^2(1691) = 5017.430^b$
H6c	Customer experience	→ Brand attitude	.905	16.224**	.877	16.484**	$\chi^2(1690) = 5016.118$	$\chi^2(1691) = 5016.119^c$
H6d	Customer experience	→ Brand loyalty	.817	6.248**	.390	3.955**	$\chi^2(1690) = 5016.118$	$\chi^2(1691) = 5022.624^d$

Chi-square difference test:
[a] $\Delta\chi^2(1) = 2.477$, p > .05 (H6a: Not supported)
[b] $\Delta\chi^2(1) = 1.312$, p > .05 (H6b: Not supported)
[c] $\Delta\chi^2(1) = .001$, p > .05 (H6c: Not supported)
[d] $\Delta\chi^2(1) = 6.506$, p < .05 (H6d: Supported)

Goodness-of-fit statistics for the baseline model: $\chi^2 = 5016.118$, $df = 1690$, p < .001, $\chi^2/df = 2.968$, RMSEA = .051, CFI = .881, IFI = .882, and TLI = .873
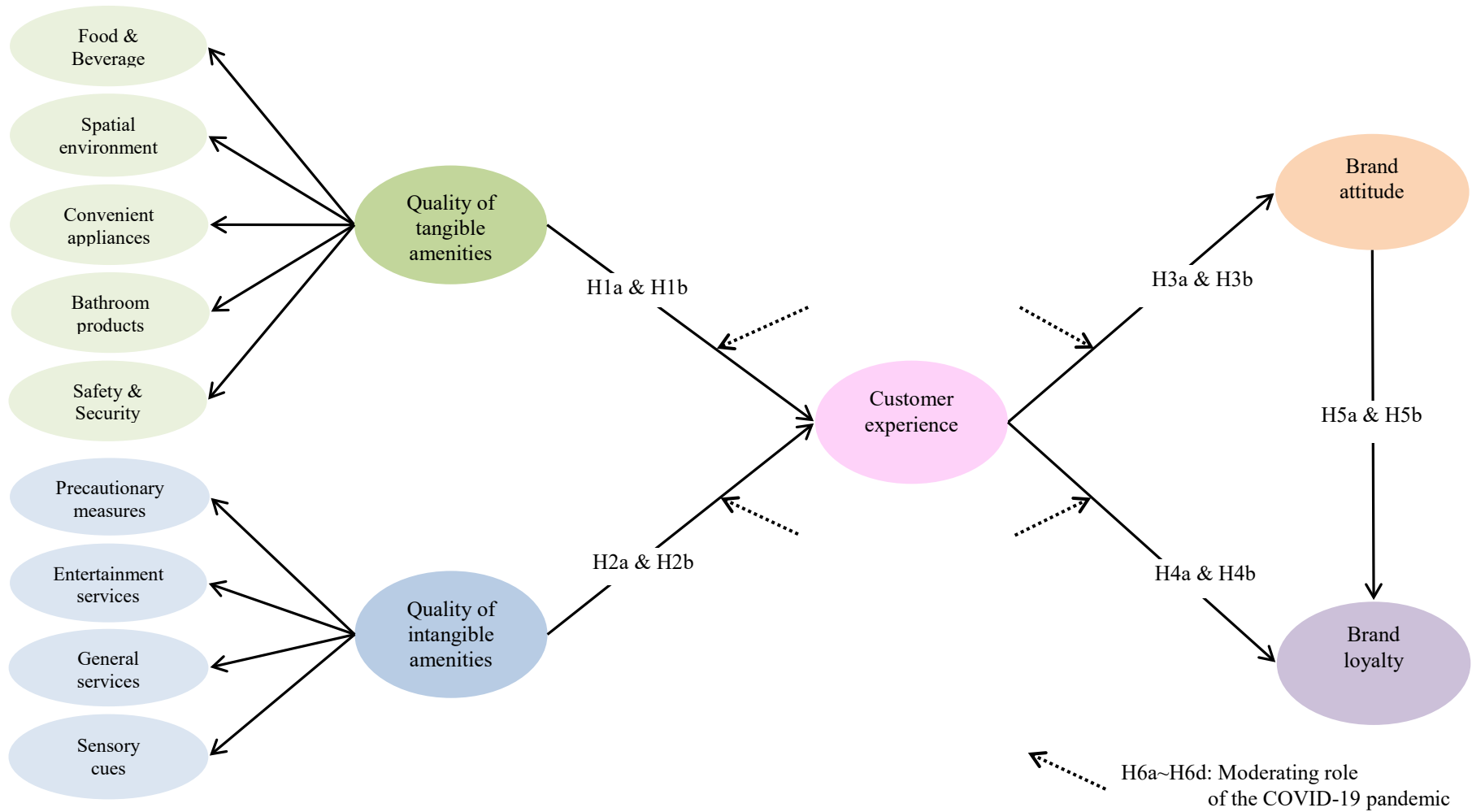
Note. **$p < .001$
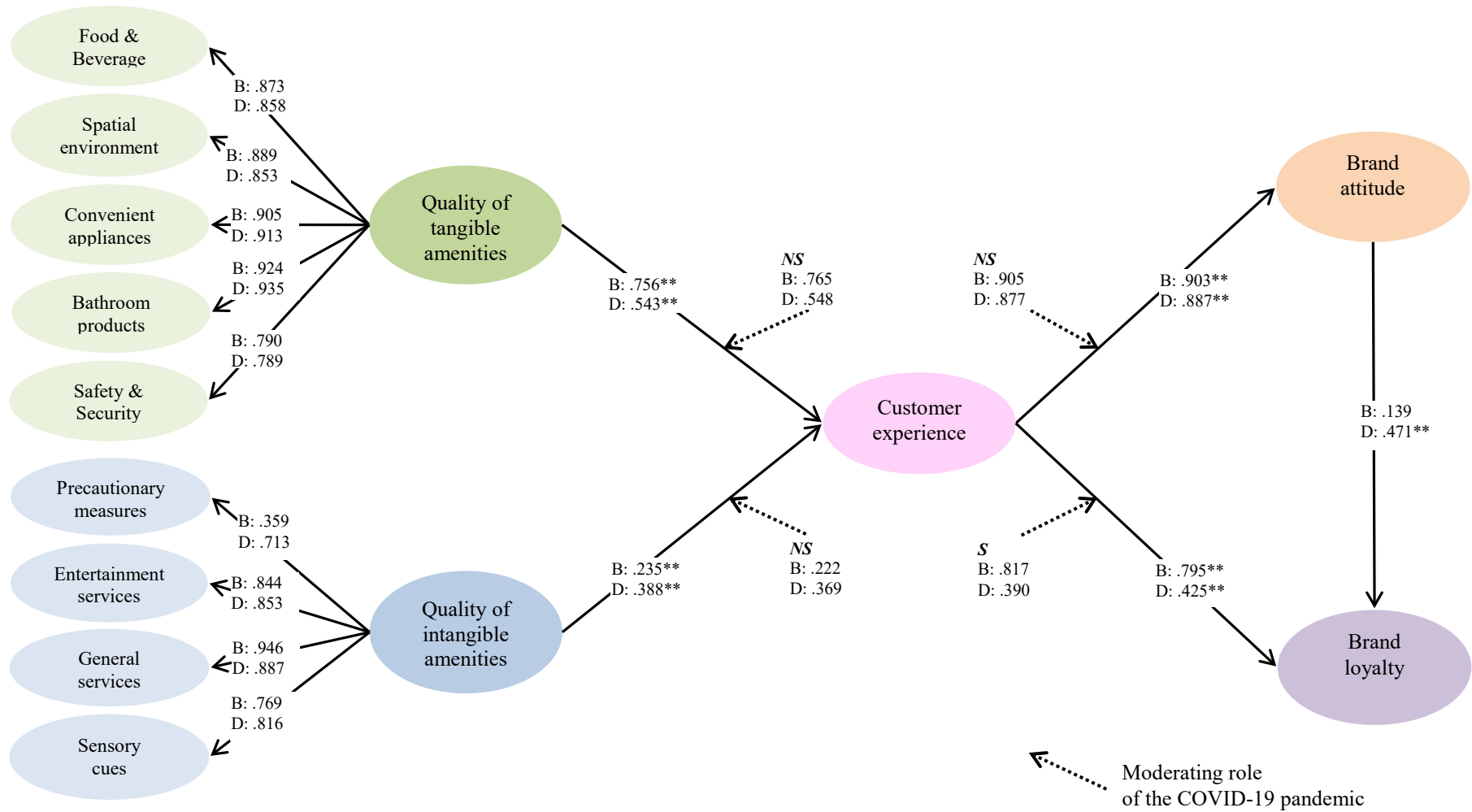
Fig. 1. Proposed model

Fig. 2. Standardized theoretical path coefficients

Notes 1: B = before the pandemic; D = during the pandemic
Notes 2: S = significant; NS = not significant
Notes 3: ** *p* < .001