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TECHNOLOGY AS A TOOL TO ENHANCE GUEST EXPERIENCE THROUGHOUT
THE CUSTOMER JOURNEY: THE CASE OF CITY HOTELS

A COMPREHENSIVE STUDY TO UNVEIL THE DRIVERS OF LOYALTY: THE ROLE
OF TECHNOLOGY

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General Abstract

Technology in city hotels is becoming increasingly important to meet guests' demands and gain a competitive advantage. Nevertheless, limited literature exists in this respect. Thus, this paper investigates the impact of technology in enhancing guest experience and satisfaction along the customer journey, including experience in co-working spaces, given their differentiating adoption by city hotels. Accordingly, four studies are conducted concerning the role of technology in marketing, hotel facilities, guest loyalty, and co-working spaces, targeting city hotels rated three- or four-stars. Both the viewpoints of customers, through online surveys, and general managers, through focus-group interviews, are utilized. Subsequently, studies' results are conjointly resorted to attain the ultimate purpose of this paper to provide hoteliers with sound recommendations to enhance their business strategy. Findings showed that city hotel general managers should excel at presenting a personalized service, while optimally balancing technology self-services and human interactions, and offering differentiating products.

Keywords: City Hotels, Technology, Loyalty, Co-Working Spaces

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General Introduction

The Rise of Smart Technology in Hotels

In the early 1970s, hotel operators started implementing technologies in business (Collins and Cobanolgu 2008; Erdem, Schrier, and Brewer 2009), as a core part of their strategy (Buhalis and Law 2008). Following the continuous tech developments, the adoption of technologies in the industry has been growing exponentially in the last few years (Collins and Cobanolgu 2008; Erdem, Schrier, and Brewer 2009; Tavitiyaman, Zhang, and Tsang 2020), leading to innovations in the way hotels deliver services and guests receive it (Jovanović and Savoui 2016; Kansakar, Munir, and Shabani 2019). Moreover, one should consider that outstanding services are, in fact, one of the key goals in this industry (Lindblad 2022).

More recently, in the first decades of the twentieth century, a new industrial revolution, Industry 4.0, driven by digitalization (Liao et al. 2017; Vaidya, Ambad, and Bhosle 2018), started shifting the world (Rekettye and Rekettye Jr. 2019), allowing sellers to have more access to real-time data about their customers, resulting in customization of both products and services (Rekettye and Rekettye Jr. 2018).

This fourth industrial revolution includes technologies such as the Internet of Things (IoT), virtual reality (VR), augmented reality, big data, Artificial Intelligence (AI¹), and robots² (Youssef and Zeqiri 2022), the latter two further explored throughout the paper. These technologies started being adopted by hotels to keep up with guests' demands, functioning as a differentiating factor (Bilgihan et al. 2016). Benefits such as a decrease in costs, improvement

¹ As The European Commission's Communication on AI (2018) defines, "AI refers to systems that display intelligent behavior by analyzing their environment and taking actions – with some degree of autonomy – to achieve specific goals." According to the same entity, AI can be applied, among others, in voice assistants or robots.

² Robots are a type of self-service technology, that interacts with guests, executes planned tasks, and delivers human-like services (Ivanov, Webster and, Bereniza 2017; Xu, Stienmetz, and Ashton 2020).

of brand image, and creation of competitive advantage, are possible with such advanced technologies (Ivanov 2020; Kuo, Chen, and Tseng 2017).

Technology as a Tool to Meet Guests' Demands

Technology development has generated a digital ecosystem, shifting business processes to the digital domain (OECD 2017, 24). Hence, information availability has been substantially improved through digitization, minimizing information asymmetries, and consequently providing consumers with greater knowledge regarding prices and product offerings (BarNir, Gallagher, and Auger 2003), increasing their bargaining power. Particularly for the hospitality industry, a critical outcome of digitalization was the emergence of electronic word-of-mouth (eWOM) shared through social networking sites, which has a significant effect on consumers' purchase decisions (Cheng and Zhou 2010), becoming the main source of information for travellers (Liu et al. 2013). In fact, Gretzel and Yoo (2008) concluded that readers of travel reviews perceive online reviews made by other customers to be more accurate, trustworthy, and enjoyable than information provided by marketers.

The above-mentioned scenario, in conjunction with the fact that customer preferences are usually based on their backgrounds and experiences (Reisinger and Turner 1999), leads to the conclusion that guests' needs and expectations are constantly increasing (Kemp and Dwyer 2001) and therefore, hotels must adapt to fulfil those shifting demands (Mohsin, Rodrigues, and Brochado 2019). Accordingly, considering the fiercely competitive environment in the hospitality industry (Baruca and Čivire 2012), technology can be utilized as a value-added amenity to meet those demands (Olsen and Connolly 2000), while simultaneously promoting differentiation and personalization, enhancing guest satisfaction and ultimately allowing to reach a sustainable competitive advantage (Cobanoglu et al. 2011), as hotels can offer immediate responses to their problems and easily access relevant information (Dalgic and Birdir 2020).

Customer Satisfaction and Customer Experience

Customer experience encompasses the whole customer journey, from the moment the customer visits the company's website or physical location, until the moment they decide to no longer benefit from the firm's services (Worick 2019). Additionally, it is derived from customer interactions with the firm, its products or services or a specific department (Gentile, Spiller, and Noci 2007). According to Espana (2006), a positive customer experience can lead to an increase in customer loyalty, a strong brand preference, increased revenues and decreased costs, being in fact crucial in the hospitality industry (Pizam 2010).

Customer satisfaction, usually quantified in a degree of happiness, is a consequence of customer experience (Worick 2019) and refers to the customer evaluation of the pre- and post-purchase experience when compared to their expectations (Oliver 2010).

Enhancement in customers' overall experience and service satisfaction can be achieved by firms through the effective usage of technology, as it leads to customized service offerings, recovery from a service failure, and spontaneously delighted customers (Bitner, Brown, and Meuter 2000). Nevertheless, it is crucial that technologies have a well-designed interface to avoid customer dissatisfaction (Kelly, Lawlor, and Mulvey 2017), as it can result in customer complaints and future behaviours such as a decrease in word-of-mouth (WOM) and repurchase intentions (Meuter et al. 2000).

The link between City and Smart hotels

City hotels are those located in urban areas, usually targeting people who intend to stay for a short period of time (ICT 2011) and are said to be more reliant on technology than other hotel types (Eugenia Ruiz-Molina, Gil-Saura, and Šerić 2013). Being known as transit hotels, those are occupied by both business and leisure travellers, according to their different needs and motivation for touring (Bedjo 2014). As their primary reason for travel is to work (Ninemeier and Perdue 2008), business travellers value convenient locations, prominent amenities (Bedjo

2014), and a relaxing stay (Bowen and Chen 2001), being less price sensitive (Millar and Baloglu 2011). Moreover, when choosing the hotel, these travellers tend to place greater value on their previous stays and recommendation from peers (Chan and Wong 2006), and, post-stay, they express less satisfaction in online review ratings than in leisure stays (Radojevic et al. 2018). On the other hand, leisure travellers primarily travel for recreation (Ninemeier and Perdue 2008), thus pursuing positive emotions, such as fun and interest (Filep and Deery 2010), and prioritizing price, a home-like environment, and a practical and accessible location for sightseeing (Jang et al. 2019). For leisure guests, recommendations by travel agents and friends tend to carry the most weight (Chan and Wong 2006; McCarthy, Stock, and Verma 2010).

According to Bilgihan et al. 2016, both business and leisure travellers present the same attitude and level of sophistication towards the adoption of innovative, technology amenities, and, subsequently, following Lee, Barker, and Kandampully (2003), it is crucial for hotels to utilize new and enhanced technological services to reinforce customer relationships and engender loyalty.

Since the tourism industry has been impacted by a persistent demand to connect with various information technologies, the term “smart” has been used in this context (Au and Tsang 2022). Smart hotels rely on four primary foundations to accommodate the client experience, being service model innovation through information technology, operational efficiency, adaption and delivery of digital capabilities, and the use of intelligent technologies (Lai and Hung 2017). Many researchers who study smart tourism define smartness as more than technological applications (Bastidas-Manzano, Sánchez-Fernández, and Casado-Aranda 2021; Höjer and Wangel 2015). Gretzel, Zhong, and Koo (2016, 560) reinforced this point, defining it as “taking advantage of smart technology in generating, controlling, and providing intelligent tourism services and/or experiences.” As a result, guests can expect improved, and more user-friendly and intuitive services (Jeremen, Jędrasiak, and Rapacz 2016). It is relevant to highlight

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that the application of such smart technologies can be employed in diverse hotel dimensions, namely in marketing, infrastructure and customer retention strategies.

In marketing, the evolution of technology and the introduction of the Internet have revolutionised the relationship between suppliers and consumers (Castells 2000), by speeding up the availability of both quantitative and qualitative information (Öörni 2004) and enabling tourists to become autonomous and more informed (Buhalis and O'Connor 2015). Moreover, the adaptation of technology also transformed the combination of mobile and desktop (Lei and Law 2019) and facilitated the guests' decision-making process (Wang and Fesenmaier 2012). On the one hand, technology led to the introduction of travel apps, such as Airbnb and TripAdvisor, that explicitly target travellers (Lu et al. 2015), allowing them to search for and book accommodation, and other tourism activities, at any time (Linton and Kwortnik 2015; Lu et al. 2015; Schaefer 2016). In this context, social media apps, and tools such as branding campaigns and evaluative online reviews, are used by hotels to learn more about consumers and potential customers (Kim, Lim, and Brymer 2015; Yen and Tang 2015), and to better determine their profiles and behaviour, adapting marketing strategies accordingly (Leung et al. 2013). On the other hand, hospitality companies have also introduced e-commerce platforms, in order to market and sell their products and services online (Buhalis and O'Connor 2015). In this sense, hotel websites act as "direct marketing tools" and "direct sales medium" (Panagopoulos et al. 2011), resulting in improved brand image and reliability (Müller and Chandon 2003).

Technologies have also been implemented in both guests' rooms and hotel facilities (Kim and Han 2020; Morgan 2020). In fact, the development and evolution of digital technologies, namely self-service technologies, robots and mobile apps, have completely transformed hotel infrastructures, and the way those operate (Anser et al. 2020; Choi et al. 2019). By allowing hotels to deliver services more rapidly and conveniently to guests, such technologies enhance

customer experience (Choi et al. 2019; Mingotto, Montaguti, and Tamma 2020), acting also as a source of efficiency and competitiveness for hotels (Shin, Perdue, and Kang 2019).

Furthermore, according to James (2022), hotels are adapting their loyalty strategies in response to guests' demand for fully individualized experiences. However, as the author highlights, in today's tech-driven reality, the traditional use of internal Customer Relationship Management (CRM) has demonstrated to be inefficient and insufficient in providing the strong data foundation required to deliver such intense personalization. Instead, this could be achieved through Smart Data technology, which uses AI and advanced analytics to capture data and help hoteliers identify the promotional opportunities that are more likely to retain guests. Furthermore, there is consensus among practitioners and academics that customer satisfaction and service quality are prerequisites for guest loyalty (Cronin and Taylor 1992) and thus, hotels can use technology to enhance satisfaction and support superior service, increasing loyalty (Lee, Barker, and Kandampully 2003).

Finally, one distinctive strategy of city hotels is the increase of their competitiveness (Gretzel, Zhong, and Koo 2016) through the generation of common value among all stakeholders (Mistilis, Buhalis, and Gretzel 2014). Accordingly, to bring together local authorities, local people and tourists (Boes, Buhalis, and Inversini 2016), city hotels resort to Co-Working Spaces (CWSs), as they share the same aim of emphasizing a feeling of community (Rus and Orel 2015). As argued by Kashyap (2019), co-workers view CWSs as an opportunity to have a separate office space without having to worry about basic amenities, and thus technology plays an important role during the choice of such space, as community members require basic technological services to properly work.

Therefore, due to the extensive use of disruptive technologies, guests' expectations and engagement in smart hotels are different from other types of hotels where human-operated services are mostly offered (Kabadayi et al. 2019), generating a distinctive customer experience

(Dalgic and Birdir 2020). Studies have been conducted aiming to comprehend the sentiment of guests towards the use of technology by hotels, with ambivalent results. Kattara and El-Said (2014) highlight customers' preference for quick and easy service to be the main reason for preferring technology-based self-services, which does not require employee-guest interaction, while the preference for human-interaction services, provided by the frontline employees to guests, can be explained by the necessity for a direct person relationship.

Overall, smart hotels should include not only smart services involving more advanced technologies, but also, as explained by Kabaday et al. (2019, 330), "personalised and pro-active services enabled by integrated technology and intelligent use of data that can anticipate and fulfil customer needs at specific times and/or locations based on changing customer feedback and circumstances", to augment and tailor the customer experience (Gretzel, Zhong, and Koo 2016).

The main purpose of this paper is to provide city hotel general managers, rated three- or four-stars, with a practical guide on how they could leverage technology to enhance customer experience and satisfaction throughout the customer journey. Most of the research that has been found regards mostly upscale and luxury hotels (Cetin and Walls 2015; Shin and Jeong 2022), and there is, thus, a lack of recent studies regarding the proposed topic targeting specifically city hotels.

This topic is of extreme usefulness for hoteliers and relevant for the present time. Firstly, guests are increasingly prompted by technology, and are thus demanding additional technological services (Lee, Barker, and Kandampully 2003). Digital technology is progressively being used to improve traditional products and services (OECD 2017, 198), including in the hospitality industry, where guest interactions are shifting towards onscreen and online interfaces (Kansakar, Munir, and Shabani 2019). Consequently, city hotels are following this trend and implementing technologies throughout the customer journey. Finally, as stated

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by Kansakar, Munir, and Shabani (2019, 61), hospitality technology systems “should be integrated seamlessly into all three phases of the guest cycle – Pre-Sale, POS [Point-Of-Sale], and Post-Sale – so as to provide a complete digital service experience for the guests.”

Resultantly, in accordance with all phases of the customer journey, four distinct studies will be conducted, each corresponding to one chapter of this paper.

The first study addresses the “Pre-Sale” stage, covering hotel marketing strategy, by answering the following research question:

RQ1: How does technology influence guests’ booking decisions?

Subsequently, for the “POS” moment, the second study covers the use of technology amenities throughout the hotel’s infrastructure, responding to the question:

RQ2: How can technology be used in hotel facilities to enhance customer experience and satisfaction?

Thereafter, a third study encompassing the “Post-Sale” experience inspects hotels’ loyalty strategy, by means of the research question:

RQ3: What are the drivers of guest loyalty, considering the role of technology within this context?

Finally, the fourth study analysis the existence of co-working spaces in hotels, as a distinctive feature of city hotels. This also relates to the “POS” stage, attracting both hotel guests and non-guests, and thus the following question is proposed:

RQ4: Why should hotels establish co-working spaces, considering their advantages and non-technological and technological user preferences?

Responding to the lack of studies targeting mid-range hotels, all the above-mentioned studies will only take into consideration city hotels rated three- or four-stars.

Chapter III: A Comprehensive Study to Unveil the Drivers of Loyalty: The Role of Technology

Introduction

As proposed by McKinsey & Company (Figure 1), the consumer decision journey is a circular path with four phases, including initial consideration; information gathering; the moment of purchase; and the post-purchase experience. This last step determines whether the customer will recall and buy again from the brand, entering the “Loyalty Loop”. Nevertheless, different types of loyalty arise, as some customers are passive loyalists, who stick with a brand without being committed to it, while others are active loyalists, who are devoted to and even recommend the brand (Court et al. 2009). These are the true loyalists, exceptionally essential for the hotel industry (Gremler and Brown 1999). Effectively, these guests drive the long-term profitability, by amplifying revenues through increased purchase frequency, basket size or both, encouraging cross-selling opportunities, as well as by decreasing marketing costs, as they spread positive WOM, which is the most effective form of marketing for hotels (Gould 1995).

Presently, the most common asset in hotel loyalty strategy is the use of CRM to gather insights regarding guest preferences, to personalize hotel service. To disrupt this trend, predictive analytics to design loyalty programs, through the identification of guests’ spending patterns, has emerged (Huang 2020). This posits an opportunity for city hotels to excel at their retention strategy, as they are generally keener on the adoption of smart technologies, thus already holding useful expertise and experience (Lee, Barker, and Kandampully 2003). Furthermore, city hotels benefit from increased possibilities to engender loyalty, as they also target business travellers, who tend to display more loyalty behaviours (Ivanov 2014).

Despite the importance of loyalty to hotels, and, specifically, to city hotels, two gaps were identified in the existing literature. Firstly, studies examining guest loyalty only include two or three of its antecedents in one model (Oh and Kim 2017), causing the necessity to integrate more concepts in a single framework. Secondly, there is a lack of research targeting city hotels.

To tackle these gaps, the objective of this study is to offer an integrated framework for city hotels' guest loyalty, by focusing on the research question: **RQ.** What are the drivers of guest loyalty toward city hotels, considering the role of technology within this context?

This topic is timely and relevant, as the move to digital over the last years has changed the buying habits of consumers (Huang 2020), creating a saturated loyalty landscape with low engagement, meaning a rise in passive loyalty (Chapple, Eizenman, and Wilkie 2022).

Literature Review

Loyalty Definition

There are two dimensions inherent to customer loyalty, namely a behavioural dimension, expressed in terms of repetitious purchase behaviour, and an attitudinal dimension, concerned with the emotional and psychological attachment to the brand (Bowen and Chen 2001; Mascarenhas, Kesavan, and Bernacchi 2006). True, active loyalists simultaneously exhibit the aforementioned dimensions, and hence they are so committed to a brand, that they do not respond to competitors' marketing efforts to cause switching behaviour (Oliver 1999). For this study, this two-dimensional definition is used and, accordingly, a loyal customer is identified as someone who not only gladly repurchases the services and maintains a positive attitude towards the company, but is so pleased that will recommend it to others, becoming an unpaid advocate for the brand (Gould 1995; Kandampully and Suhartanto 2000).

Antecedents of Guest Loyalty and the Role of Technology

A theoretical framework identifying the drivers of guest loyalty has not been established yet (Martínez and Rodríguez del Bosque 2013). Nevertheless, practitioners and academics have covenanted certain loyalty prerequisites, namely customer satisfaction with hotel characteristics, service quality (Cronin and Taylor 1992) and brand image (Kandampully and Suhartanto 2000). Given the rise in guests' demand for technology (Fan, Lu, and Mao 2022), hotel loyalty has also been evaluated in the context of technology amenities (Lee, Barker, and

Kandampully 2003), loyalty programs (Xie and Chen 2014), and online communication (Ibrahim 2021).

Hotel Characteristics

It is extensively stipulated that enhancing customer satisfaction is pivotal in the success of the hotel industry (Choi and Chu 2001), as satisfied guests are more prone to engage in repeat business and favourable WOM (Fornell 1992). Accordingly, to further analyse the inference of a customer satisfaction-customer loyalty interrelation (Hallowell 1996), studies have been conducted to investigate the dimensions of hotel satisfaction positively linked with loyalty, being the most common the performance of reception, food and beverage, housekeeping, and price (Kandampully and Suhartanto 2000). Nonetheless, a study by Skogland and Siguaw (2004) regarding city hotels has demonstrated a weak relationship between customer satisfaction with such hotel features and loyalty, meaning that a satisfied guest is not guaranteed to return nor recommend the hotel. These empirical contrarities are the reason for formulating the following hypothesis: **H1**. Hotel characteristics positively influence customer loyalty toward city hotels.

Service Quality

Service quality is depicted through five dimensions, namely staff's ability to deliver the promised service (reliability), their aptitude to convey trust and confidence (assurance), their caring and personalized attention (empathy), their swiftness in assisting guests (responsiveness), and their professional appearance (tangibles) (Parasuraman, Zeithaml, and Berry 1998). This is distinctly significant for the service industries, due to their intangible nature, making encounters predominantly interpersonal interactions (Czepiel 1990). Accordingly, service quality is considered a key point of difference (Kotler and Armstrong 2014) and a driver of sustainable competitive advantage in the hotel industry (Callan and Kyndt 2001), creating added value for guests (Gummesson 2006). Resultantly, studies have demonstrated that hotels providing a high-quality service engage in higher customer loyalty (Jasinskas et al. 2016; Tabaku and Kruja

2019). However, it has been argued that because city hotels tend to adopt more technology-based services, human interactions play a nonessential role in engendering loyalty toward these hotels (Lee, Barker, and Kandampully 2003). Drawing on these findings, this study posits the hypothesis: **H2**. Quality service positively influences customer loyalty toward city hotels.

Hotel Image

A firm's image comes to a customer's mind when hearing the organisation's name (Nguyen 2006), and it is formulated based on previous experiences with the brand (Jani and Han 2014). There are two main dimensions of the corporate image: the functional dimension, concerning the hotel's physical environment, including external appearance and layout; and the emotional dimension, which regards the psychological aspects that are manifested by feelings and attitudes towards the organization (San Martín and Rodríguez del Bosque 2008; Giraldi and Cesareo 2014). Correspondingly, an hotel's aesthetically pleasing facilities and the ability to reflect customers' identity and personal values will instil positive attitudes towards that brand (Su and Reynolds 2017). Accordingly, studies have confirmed that overall image exerts a significant influence on brand loyalty (Yu, Seo, and Hyun 2021). Notwithstanding, Huang, Cheng, and Chen (2017) argue that the influence of image specifically on hospitality brand loyalty has not been empirically finalized nor adequality researched. Following this literature, a third hypothesis is proposed: **H3**. Hotel image positively influences customer loyalty toward city hotels.

Technology Amenities

To remain competitive, hotels strive to meet consumers' demand for innovative, automated technologies (Erdem, Schrier, and Brewer 2009). Accordingly, hotel companies have invested in self-service technologies, for instance, in-room tablets and self-check-in and -out kiosks, designed to give guests greater control over their stay, a sense of greater convenience and speed, high-quality personalization, and fun and pleasure (Bilgihan et al. 2016; Erdem, Schrier, and Brewer 2009; Kattara and El-Said 2014; Margarido 2015). Considering this evidence, studies

demonstrate that the supply of varied and innovative technology amenities by hotels is pivotal for guest loyalty (Bilgihan et al. 2016; Chen 2015; Cobanoglu et al. 2011). Nevertheless, Beatson, Coote, and Rudd (2006) and Meuter et al. (2000) detected a variety of factors that provoke dissatisfaction with technology-based services, resulting in a negative link between technology amenities and loyalty. Hence, this proposition has been formulated: **H4**. Technology amenities positively influence customer loyalty toward city hotels.

Loyalty Programs

In the hotel industry, gamification and engagement economy are embodied in the accumulation of points through loyalty programs, where the different membership levels lead to hierarchical customer status and thus access to exclusive rewards (Ivanov 2014), prizing repeat guests (Mason, Tideswell, and Roberts 2006) while tracking their preferences (O'Malley 1998). Xie and Chen (2014) attributed the perceived value of loyalty programs to three areas, namely the convenient use of the loyalty program (functional value), the emotional attachment due to status recognition and personalized treatment (emotional value), and the partnerships and point pooling conditions (external value). On this account, loyalty programs are used as a competitive tool other than price to increase the industry's low switching costs (Nastasoiu and Vandebosch 2019), by creating differentiated services (Klemperer 1987). Accordingly, empirical research has demonstrated the crucial role of loyalty programs in inducing guest loyalty (Koo, Yu, and Han 2020). Despite that, Berman (2006) has mentioned that loyalty programs fail to engender loyalty due to low levels of commitment. Based on these arguments, the next hypothesis is proposed: **H5**. Loyalty programs positively influence customer loyalty toward city hotels.

Online Communication

To benefit from the myriad of online network users, hospitality businesses have engaged in social media marketing (Mhlanga and Tichaawa 2017). Firstly, integrated marketing communications are used to capture precise data on customers (Kliatchko 2005), namely personal

views, and preferred brands and services (Choi et al. 2016), to then help develop targeted push strategies (Mauri and Minazzi 2013). Subsequently, due to the interactive nature of social media, these marketing and communication initiatives facilitate a strong bond between the customer and the brand (Keller 2009), creating personalized messages (Peltier, Schibrowsky, and Schultz 2003), and ultimately leading to high degrees of customer loyalty (Nisar and Whitehead 2016). Although studies by Ibrahim (2021) and Ibrahim and Aljarah (2018) have confirmed that a hotel's brand strategy through social media has a significant positive influence on revisit intentions, Minazzi and Lagrosen (2013) argue that such social networks fail to engender loyalty, and ought to rather be exclusively used as promotional instruments. Thus, the following hypothesis is developed: **H6**. Online communication positively influences customer loyalty toward city hotels.

Finally, it is relevant to consider that guest loyalty can be rather fomented by a combination of factors (Mascarenhas, Kesavan, and Bernacchi 2006). Nevertheless, the existing studies that combine multiple constituents only use two or three variables, explaining a low level of loyalty variance (Kandampully and Suhartanto 2000). Thus, additional categories must be contemplated, and a final hypothesis is submitted: **H7**. Hotel characteristics, service quality, hotel image, technology amenities, loyalty programs, and online communication significantly explain the variance of customer loyalty in city hotels.

Figure 2 exhibits the conceptual framework of this study.

Methodology

Participants and Procedure

Quantitative and qualitative data were gathered to unveil the drivers of loyalty in city hotels. An extensive review of the literature resulted in 35 attributes related to categories that are most linked with loyalty in hotels (Table 1), namely hotel characteristics (H1), service quality (H2), hotel image (H3), technology amenities (H4), loyalty programs (H5) and online

communication (H6), the latter three related with technology. Subsequently, these were tested as research hypotheses to be the drivers of loyalty in city hotels. Therefore, data collection was conducted, quantitatively, through an online questionnaire targeting individuals who had previously stayed in a city hotel. A total of 128 valid responses were considered for the data analysis. Complementary, to obtain a more expert and administrative perspective, a qualitative approach was used by conducting focus-group interviews with four general managers from city hotels, which were knowledgeable about technology applications in the city hotel industry. The interviewees were Henrique Castro from Evolution Cascais-Estoril, Manuel Carneiro from Yotel Porto, Maria Taipa from Moxy Lisbon City, and Sérgio Bernardo from Lumen Hotel Lisbon.

Measures

The survey consisted of eight sections. Section one asked respondents to rate, considering their previous experience, the sentence “I would stay again in this hotel and recommend it to other people” through a five-point Likert scale (1= strongly disagree; 5= strongly agree), aiming to examine participants’ loyalty level. Then, in sections two to seven, each deep-diving in one of the six categories, a five-point Likert scale was used to assess the extent to which the presented statements incited feelings of loyalty to city hotels (1= very unimportant in developing feelings of loyalty; 5= very important in developing feelings of loyalty). The final section explored demographics. Appendix 1 illustrates the survey and further explores the reasoning behind each section. The qualitative analysis asked managers their perspective regarding the question “What are the factors that drive the most loyalty in city hotels?”.

Data Analysis Process

Firstly, the existence of outliers was inspected. Subsequently, exploratory factor analysis (EFA) was conducted to appropriately group the 35 attributes into new variables (DeVellis 2012), which were validated and adapted through reliability analyses. Then, linear regression analyses were performed for each new variable to test hypotheses H1 to H6. Finally, to test H7,

a multiple linear regression simultaneously using all the variables was conducted. The dependent variable for each of these regressions was the level of guest loyalty toward city hotels, which comprised a single measurement item, hence purging the scale was not necessary. SPSS 29.0 statistical program was utilized for data analysis. The qualitative analysis was thoroughly examined with the author's observations.

Results

Sample Profile

The demographic characteristics of the research sample are listed in Table 2. Regarding the travel purpose, 76% of respondents were leisure tourists, while 24% were business tourists. The survey participants included 80 females (63%) and 48 males (38%). In terms of nationality, nearly all participants came from Portugal (88%). Generation Z respondents accounted for 27%, millennials for 13%, generation X for 46%, and baby boomers for 13%. Respondents had distinct educational levels, from high school degrees (16%), bachelor's degrees (29%), and master's degrees (52%), to doctoral degrees (4%). Lastly, participants showed a high level of loyalty towards city hotels, with an average of intentions to revisit and recommend of 4.3 out of 5.

Factor Analysis

EFA was conducted to determine the underlying structure of the data by creating correlation variable composites derived from the 35 attributes presented in this analysis (Pitt and Jeantour 1994). To extract factors with adequate convergent validity, the EFA used principal components analysis with the constraints of eigenvalues exceeding 1 (Malhotra and Birks 2007) and factor loadings exceeding 0.4 (Lai and Hitchcock 2015), and, after testing the correlation matrix for non-multicollinearity, the Varimax orthogonal rotation method was applied (Hair et al. 2006). The sample was found to be appropriate based on the Kaiser-Meyer-Olkin (KMO) value ($0.760 \approx 0.800$) and Bartlett's test of sphericity ($p < 0.001$) (Bartlett 1954; Kaiser 1974).

Following this process, 31 out of the 35 statements were loaded properly on 9 factors, cumulatively accounting for 69.928% of the variance. The internal consistency of each factor was approved through reliability analyses, considering Cronbach's alpha values higher than 0.7 (Nunnally 1978). The generated factors consist of the main determinants of guest loyalty toward city hotels and were labelled as follows: Service Quality (F1), Operational and In-room Technologies (F2), Hotel Characteristics (F3), Loyalty Programs (F4), Online Communication (F5), Hotel Image (F6), Business-related Services (F7) (i.e., technology-equipped working spaces), Self-check-in and -out Technologies (F8), and Technology Essentials (F9) (i.e., HSIA and universal battery chargers). Table 3 displays the results of the factor and reliability analyses.

Simple Linear Regression Analyses

To test the proposed relationships in H1 to H6, nine simple linear regression analyses, each using one factor as the independent variable, were applied to assess the influence of each category in driving loyalty in city hotels, which was the dependent variable for all the models. The results of the nine models are shown in Table 4. For a cut-off significant F-value selected at the $\alpha = 0.01$ level, three models yielded a positive statistically significant correlation between the independent and dependent variables. Resultantly, the significant independent variables were F3: Hotel Characteristics ($\beta = 0.327$), F1: Service Quality ($\beta = 0.359$), and F4: Loyalty Programs ($\beta = 0.212$), hereby supporting H1, H2, and H5, respectively. The variable F6: Hotel Image, as well as the variables concerning technology amenities, namely F2: Operational and In-room Technologies, F7: Business-related Services, F8: Self-check-in and -out Technologies and F9: Technology Essentials, were not found to be significant, ergo refusing H3 and H4, respectively. For an F-value set at $\alpha = 0.10$, the variable F5: Online Communication was statistically significant ($\beta = -0.107$), nonetheless, with a negative coefficient, hence refusing H6.

Multiple Regression Analysis

To test H7 of this study, the 9 factors were simultaneously used as independent variables to estimate a multiple linear regression model with guest loyalty as the dependent variable. Estimation results are shown in Table 5. The model yielded a significant R^2 of 60.2%, meaning that hotel characteristics, service quality, hotel image, technology amenities, loyalty programs, and online communication together significantly explained 60% of the variance in guest loyalty toward city hotels, thereby confirming H7. Additionally, assuming a significant F-value for keeping a variable set at 0.01, four variables were found to have a strong statistically significant correlation with the dependent variable, namely, F1: Service Quality ($\beta = 0.359$), followed by F3: Hotel Characteristics ($\beta = 0.327$), and lastly F4: Loyalty Programs ($\beta = 0.212$). The variable F5: Online Communication was again negatively statistically significant ($\beta = -0.107$). Coherently, the multiple regression model yielded the same findings as the simple regression models.

Table 6 summarizes the results of the proposed hypotheses.

In-depth Interviews

To complement the quantitative analysis, interviews with four city hotels' general managers were conducted to gather a supply-sided perspective. Transversal to all the managers, the existence of a loyalty program was found to be the main catalyst for returning guests. For Castro, city hotel guests appreciate the ability to earn points in each stay, which they can then redeem on discounts or free nights across hotels from the same chain. On top of that, guests were said to cherish the recognition and individualized care associated with the different statuses of the loyalty program. In addition, according to Taipa and Bernardo, service quality is essential to promote loyalty, arguing that employee engagement is the foundation of the hospitality industry. They also stated that service excellence is related to employees' ability to anticipate loyal guests' requests, offering personalized service. Finally, for Carneiro, loyalty is prompted by the overall guest experience, which was said to be influenced by location, quality

service, and availability of technology amenities, providing guests with feelings of an unconventional, innovative stay. Concluding, the qualitative analysis confirmed the results of the quantitative analysis concerning the positive influence of service quality, loyalty programs, and overall experience on guest loyalty.

Discussion and Study Contributions

The research result that service quality is the most important determinant of guest loyalty is in line with a previous study by Nyagadza et al. (2022). City hotels generally adopt technology self-services, allowing guests to produce a service without direct employment involvement (Kattara and El-Said 2014). However, even within this context, a high-quality service stemming from direct employee-guest interactions was found to be the most important catalyst of guest loyalty. Taipa commented that “Customer service allows us to go the extra mile and provide a more personalized experience. It is especially relevant when welcoming a guest, as a friendly greeting creates a special first impression, and thus a positive emotion towards the hotel, probably translating into revisiting intentions.” Accordingly, these interpersonal interactions generate trust and give rise to a relationship where employees meet the need of guests to feel treasured and welcomed (Chen 2011). Human service is thus crucial for the construction of a social bond and an emotional connection, which are imperative for guest retention (Chiang and Trimi 2020).

This study additionally confirms that hotel characteristics are important in mediating guest loyalty toward city hotels. Both business travellers, who spend most of their time away on business, valuing hotel location, and leisure travellers, who seek fun and rest, rating highly hotel facilities, view hotels as their home or even office away from home, and thus they want to be certain that the hotel will cater to all their needs (Ivanov 2014). Accordingly, city hotel guests often favourite places based on the features related to the core benefit of a hotel (temporary accommodation) (Kandampully and Suhartanto 2000), namely cleanliness and hygiene, diversity of hotel facilities, location and accessibility, value for money, and food and beverage. City

hotels that excel at offering such services will allow guests to escape social stresses and release their emotions, increasing customer retention (Korpela 1992).

The provision of a loyalty program was also found to positively impact guest loyalty, matching previous studies from Koo, Yu, and Han (2020) and Nastasoïu and Vandenbosch (2019). City hotel guests value a free-enrolment, points-based and tiered loyalty program (Peacock 2022), that establishes relevant partnerships, connecting the community. This allows guests to use the program throughout the whole hotel chain, by collecting points in each stay, to then achieve a higher tier, and be recognized according to that status, creating a sense of reward for spending money on that brand. This is in line with what Castro stated: “Guests value the most recognition, including recognition of their status, and of their love for the brand.” He further added that it is very common for business guests to accumulate a myriad of points while on business trips, to then spend them on a free-of-charge summer vacation with their families. Accordingly, loyalty programs are effective in fostering guest loyalty when they provide a combination of hard benefits, which eliminate direct financial costs (e.g., complimentary stay), and soft benefits, reflecting guests’ special status (e.g., late check-out) (Yi and Jeon 2003), motivating an ongoing purchasing and accumulation of rewards (Lewis 2004).

Contrary to the results of Ibrahim (2021) and Ibrahim and Aljarah (2018), the present study evidenced that the use of online communication negatively affects guest loyalty toward city hotels, leading to a decrease in revisit intentions. This may be related to the fact that the guests in this sample displayed a high level of loyalty (average loyalty of 4.3 out of 5), indicating some familiarity with the city hotel they had in mind. Accordingly, using online communication to target this type of guest may be counterproductive, and may even originate feelings of perceived intrusiveness (Chang, Rizal, and Amin 2013). Instead, as proven by Tatar and Eren-Erdogmus (2016), online communication is more effective to rather attract new guests, which can then become loyal customers. Nonetheless, to sustain already loyal guests, online communication

can be used to advertise and create engagement with loyalty programs, in lieu of the hotel itself, considering their importance for city hotels (Berezan, Yoo, and Christodoulidou 2016).

Furthermore, this study suggested that hotel image is not significantly related to guest loyalty toward city hotels. A possible explanation for this is that hotel image is a precursor of customer satisfaction with hotel characteristics and service quality, affecting guest loyalty indirectly (Kandampully, Juwaheer, and Hu 2011; Loureiro and González 2008). The availability of technology amenities yielded the same conclusion. This can be explained based on the novelty theory, suggesting that guests might first look for technology out of curiosity (Hirschman 1980), but as they become familiar with such amenities, the novelty impact will fade (Beldona and Cobanoglu 2007), and hence technology amenities are insufficient to sustain loyalty.

Finally, the variance in guest loyalty toward city hotels was largely explained when all the above-mentioned categories were simultaneously tested. As highlighted by Carneiro, “Guests return mostly for the experience. We offer such a property that you do not need to leave the hotel to do something, and, due to that, our target is very happy with us.” This finding suggests that guest loyalty is explained by the total customer experience, characterized by a positive, engaging, enduring, and socially fulfilling physical and emotional interaction between guests and city hotels (Mascarenhas, Kesavan, and Bernacchi 2006).

Theoretical Contributions

This study offers two major theoretical contributions by filling the gap in the current literature. Firstly, the comprehensive inclusion of the chosen variables in one model is exceptionally relevant, as prior studies only assessed one or two independent variables of loyalty. Contrarily, this study offers a more complete model by successfully integrating into the same frame six key predictors of loyalty. Secondly, very limited research has compared the distinct impact of non-technological versus technological factors on guest loyalty. Accordingly, non-technology factors, namely hotel characteristics and service quality were found to be the primary drivers of

loyalty, while technological factors were seen as a tool for differentiation, with loyalty programs driving loyalty, but online communication decreasing revisit intentions.

Managerial Contributions

This study provides the city hotel industry with practical contributions that will help general managers design the best loyalty strategy, thus improving business performance. Firstly, this research suggests that hoteliers should focus primarily on excelling at high-quality service, and thus invest in employee training to guarantee a leadership position in a market. Another strategy to motivate staff to commit to impeccable service is to plan an attractive merit pay compensation strategy, where employees are rewarded with a variable bonus, in the function of their cross-sales amount and positive evaluations from guests. Secondly, management must channel their resources into market research and analyse how their guests' preferences differ, aiming to deliver hotel characteristics following the requirements of their clientele. Thirdly, a hotel chain must maintain its individuality through personalized service. The preferred tool to achieve this is through points-based, tiered loyalty programs, allowing hotels to differentiate and lock in loyal guests, by offering tailored benefits to members of the program. As a part of loyalty programs, managers must use predictive analytics to plan for the behaviours that drive high-value guests, aiming to design a network of partnerships and incentives that prompt those behaviours (Huang 2020). Furthermore, the usage of such loyalty data should be internally maximized through CRM, allowing staff to recognize guests in the upper tiers of the loyalty program, as well as the special requests of guests, thereupon cherishing them accordingly. Fourthly, the amount of online communication directed at loyal guests should be constrained and carefully selected, and, finally, city hotels must deliver an integrated, unbeatable, and enhanced guest experience, considering the abovementioned recommendations, as well as the relevant role of a consistent hotel image and the availability of innovative technology amenities.

Conclusion and Future Research

This study offered new insights into the drivers of guest loyalty toward city hotels and provided an actionable focus for general managers in their pursuit of competitive advantage. Different from existing literature, it comprehensively combined and compared six categories of hotels most linked with loyalty. The quantitative analysis indicated that hotel characteristics, service quality, hotel image, technology amenities, loyalty programs and online communication altogether are important factors in determining guest loyalty toward city hotels. Among these factors, service quality, hotel characteristics, loyalty programs, and online communication (although negatively) are, individually, significant influential factors for guest loyalty toward city hotels. The qualitative analysis yielded similar results, reiterating the significant positive influence of service quality, loyalty programs, and overall experience on guest loyalty

Accordingly, hotels must first excel at fostering conditions most linked to the core offering of a hotel, namely proper hotel characteristics and service quality. Subsequently, to achieve differentiation, city hotels must use technology as a support to provide and make the best use of loyalty programs, enhancing customer experience and satisfaction. Finally, hoteliers must meticulously manage online communication, to hinder its negative effect on revisit intentions.

Limitations and Future Research

Despite the current research's theoretical and managerial contributions, caveats exist that may limit these recommendations. Firstly, the sample of survey participants consisted mostly of Portuguese hotel guests, and, therefore, the generalizability of the results could be insufficient. Additionally, the majority of respondents were leisure guests, and hence, a study with equal numbers of business and leisure travellers may provide different results.

Future studies can examine the differences in the drivers of loyalty between business and leisure guests, due to their different needs and characteristics, allowing hoteliers to delineate a more tailored loyalty strategy.

Chapter IV: Advantages for Hotels and User Preferences in Hotel Co-Working Spaces: A Managerial Perspective

Introduction

The co-working concept has evolved over the years, with similar concepts serving as pre-models of the current co-working spaces (CWSs) (Di Risio 2021). In 2005, the first official CWS, *San Francisco Co-working Space*, was created by Brad Neuberg, who intended to combine the feelings of productivity and independence of working alone with the social aspect of working with others in a community (Di Risio 2021; Foertsch and Cagnol 2013; Grinberg 2019). This CWS and its descendants have surged within a context where a new generation of workers and work culture emerged as a result of pressures for green practices, a rapid pace of technological advancements, and the digitalization and globalization megatrends (Babiak and Trendafilova 2011; Berbegal-Mirabent 2021; Gant and Kiesler 2002, 121; Green 2014; Moriset 2013). These new workers have been changing societal conventions (Appelbaum 2013, 120), have had more independence over their work site and schedule (Gant and Kiesler 2002, 121; Green 2014) and have said to prefer to work for themselves or a startup (Moriset 2013). Moreover, this new generation of workers aims to enhance their work-life balance, and work outside their homes (Fuzi, Clifton, and Loudon 2014; Moriset 2013). Nevertheless, considering the high rise in rent prices in city centres, millennials found it difficult to establish there their offices (Bergel-Mirabent 2021), which resulted in a shift towards remote work (Gerdenitsch et al. 2016) and led to an increase in attendance in CWSs over the last years (Sykes 2014, 142).

Accordingly, CWSs emerged to give these freelancers and start-up employees the chance to work in a site other than their home, local coffeeshop or library, as these could be isolating, distracting and unproductive (Grinberg 2019). Subsequently, since 2006, the number of CWSs has been exponentially increasing into a global phenomenon, catering to every type of worker (Grinberg 2019). In 2020, there were approximately 19,000 CWSs (Statista 2022a), and, from

2021 onwards, despite COVID-19, these are estimated to grow 21.3% per year, being expected to reach 40,000 CWSs worldwide by 2024, with 5 million people coworking (Di Risio 2020). Although, during COVID-19, CWSs registered a large decrease in their occupancy due to lockdown measures, in the current post-crisis period, companies have been motivating workers to work remotely, increasing the demand for such spaces (Ceinar and Mariotti 2021).

Despite this acknowledgement of success, limited academic literature exists on the desired characteristics of CWSs, and on their impact on work productivity, community building and collaboration between workers (Rus and Orel 2015). Moreover, most of the available studies target traditional CWSs (Tan and Lau 2020; Weijs-Perrée et al. 2018), and hence, it is observed a lack of recent studies about the advantages of CWSs for hotels and the features that guests value the most in such hotel spaces, particularly in city hotels.

Considering these gaps in the literature, the ultimate purpose of this study is to provide city hotels' general managers with a practical guide on how to enhance the customer experience in hotels' CWSs, while inspecting guests' technology desirability for such spaces. Following this, the present study will collect perspectives from city hotels' general managers, to firstly confirm the advantages of CWSs to hotels, and secondly, to assess user preferences toward those spaces.

Literature Review

Co-Working Spaces

CWSs, entitled by Spinuzzi (2012) as “working alone together” places, can be described as shared office environments (Gerdenitsch et al. 2016; Tan and Lau 2020), either for short- or long-term use, offering both office and social areas where employees from distinct companies work together, partaking in professional collaborations (Capdevila 2014; Gandini 2015; Jubitana 2017; Moriset 2013; Pohler 2012; Spinuzzi 2012).

Therefore, this emergent concept of workspace contributes to workers' social support (Gerdenitsch et al. 2016), as they benefit from social interactions, knowledge sharing and

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brainstorming, and co-creation with other co-workers (Deskmag 2015; Fuzi 2015; Spinuzzi 2012). Furthermore, such spaces promote entrepreneurship development (Bouncken and Reuschl 2018; Waters-Lynch and Potts 2017), by fostering innovation and creativity (Berbegal-Mirabent 2021) and the creation of a community (Blagoev, Costas, and Kärreman 2019).

CWSs are essentially located around or in urban areas (Waters-Lynch and Potts 2017) and are mostly frequented by millennials (Berbegal-Mirabent 2021), namely independent professionals, such as self-employed workers, freelancers, remote workers, people working at microbusinesses, and consultants (Bouncken and Reuschl 2018; Gandini 2015; Parrino 2015; Pohler, 2012; Spinuzzi 2012). Comprehensively, CWSs can be considered a new organizational form and business model innovation, offering unique solutions to individual professionals, only feasible as they are all in the same physical space (Howell 2022).

Co-Working Spaces in Hotels and Respective Advantages

The COVID-19 crisis led to major setback for the hospitality industry (Butler 2022). Considering the rising phenomenon of remote work, hotels attempted to find new ways to overcome this loss and accelerate revenues, particularly by offering rooms as spaces to work, and expanding their service offer into CWSs (Jain 2022; Joshi 2022). Large hotel chains, namely Accor, have followed this strategy, allowing locals to check into the rooms to work, and taking advantage of the services already available, such as room cleaning and a quiet space (Joshi 2022). Following this, hotels also started to convert lobbies, event rooms, or even lounges into CWSs, and subsequently marketed them as such on CWSs platforms and/or on the hotel's website. By being early adopters, hotels using this strategy have established a differentiation factor when compared to competitors and have been seen as trendsetters (Butler 2022).

According to Jain (2022) and eHotelier (2021) converting large hotel spaces into CWSs has brought several advantages for hotels, creating a competitive advantage. Firstly, hotels already possess in their common areas the main amenities needed to work, namely tables,

chairs, and high-speed internet access (HSIA), requiring a low investment when compared to the establishment of new spaces from scratch. Secondly, CWSs can augment the hotel demand, by targeting new customer segments, which might assist hotels in harmonising the seasonal demand levels. Thirdly, hotels can generate new revenue opportunities, as co-workers use other hotel services, namely the restaurant, bar, or gym. By ensuring this additional income, hotels can be more flexible than traditional CWSs in terms of charged fees, gaining a point of difference and a competitive advantage. Also, by being open 24-hours, unlike traditional CWSs, hotels can offer workers more time flexibility, while augmenting their window of opportunity for extra revenues. Overall, CWSs in hotels have created a new hybrid hospitality model, by combining accommodation and co-working opportunities in the same space (eHotelier 2021).

Despite the abovementioned list of advantages, currently, there is no proper literature testing the veracity of such benefits for city hotels. Following this, the first objective of the present study is to inspect the advantages of co-working spaces to city hotels.

User Preferences in Co-Working Spaces

Users' preferences for CWSs have been inferred from research concerning the broader concept of co-working, due to the non-existence of studies regarding the topic.

It is argued that, for co-workers, the most important characteristics of CWSs are their physical attributes, consisting of the CWS location (Capdevila 2014), and its inspiring atmosphere, interior aesthetics and layout, strongly correlated with user satisfaction (Fuzi 2015). Users value a convenient site, accessible by car and/or public transport, as well as the ability to access shared resources and facilities through a semi-open layout (i.e., a combination of workspaces and meeting rooms) (Tan and Lau 2020; Weijs-Perrée et al. 2018).

Thereafter, both Tan and Lau (2020) and Weijs-Perrée et al. (2018) report that co-workers attach the most importance to leasing attributes, in which different types, flexible memberships and affordable fees are significantly related to user satisfaction. These allow co-workers to

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occupy the space either temporarily or on an ongoing basis, adjusting to their business needs. Contrarily to the long commitment associated with traditional office leases, this signals CWSs as a low-commitment office alternative, accommodating businesses in distinct life cycle stages, and allowing them to grow within the same place. Subsequently, as part of service attributes, co-workers rate highly the opportunity for information and knowledge exchange (Tan and Lau 2020) and, accordingly, they express a preference for a diversity of tenants, i.e., from different business fields, granting access to an enlarged knowledge pool (Weijs-Perrée et al. 2018).

Lastly, contrary to previous studies by Bates (2006), Capdevila (2015) and Merkel (2015), the recent studies conducted by Tan and Lau (2020) and Weijs-Perrée et al. (2018), found other service attributes to have the least influence on user satisfaction, but still being essential. These aspects encompass the value of community building, and networking and collaborative opportunities, which are stimulated by social events, for instance, festive events, and yoga and salsa classes (Tan and Lau 2020), and by the desired supply of diverse workspaces, mainly an open work environment, kitchen areas, event spaces, informal zones, concentration rooms, and meeting spaces, the latter being globally highly demanded (Foertsch 2022).

Finally, CWSs are expected to have uninterrupted power supply, and may offer some value-adding appliances, namely flat digital screens and tablets; TV and HDMI cables (Kashyap 2019); presentation equipment (e.g. projectors and whiteboards); recording equipment (e.g. microphones, video cameras, specialist lighting, tripods, and studio-recording apps); ergonomic furniture; chargers, and headphones; and office hardware (e.g. business-class printers, scanners, paper shredders, telephone, photocopiers) (Noori 2022).

Technology as a Tool to Meet Customer Needs

The constitution of workplaces, namely CWSs, has been changing with the evolution of digital technologies, including the automation of tasks (Autor 2015; Bissell 2018; Richardson 2018). Moreover, workers' contact and connection with technologies has reached a high level,

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where mobile technologies, Internet of Things and cloud computing are considered indispensable to work and communicate (Yang, Bisson, and Sanborn 2019), and provide work location-flexibility (Müller 2016). Technologies are then the base and a crucial aspect of CWSs (Endrissat and Leclercq-Vandelannoitte 2021). Following this, it is of extreme importance to further explore which types of technologies to adopt in such spaces, considering that co-workers depend on those to work (Kopplin, Gantert, and Maier 2021).

Various professionals have concluded that CWSs should embrace high-end technological features, namely touchless technologies (Coworkers 2022). By installing advanced building access systems, security can be enhanced, ensuring only members have access to it. Resorting to technology, this can be done through keyless access being provided to workers, using smart cards (Anderson 2022; Kashyap 2019). Security can also be enforced with the employment of online reservation systems, which give workers more flexibility and make it easier and faster for them to book a place or a meeting/conference room, and allow check-in through their mobile phone. In the end, users have a more seamless experience, tailored to their preferences and needs, eliminating the need of direct interaction with employees (Coworkers 2022).

According to Anderson (2022) and Kashyap (2019), a reliable and fast internet connection is another key element of CWSs. Despite not being the latest technological advancement, these spaces should provide HSIA, with high levels of bandwidth and frequency, ensuring security and its use by all workers to complete every task they might need to complete (Noori 2022).

Presently, there is no proper literature regarding user preferences for CWSs in hotels. Furthermore, the existing literature that evaluates the most valued attributes of traditional CWSs is still very limited. Accordingly, the second objective of this study is to address the knowledge gap between customer preferences regarding traditional CWSs and CWSs operating in hotels.

Methodology

For the present study, existing literature was reviewed to understand the advantages of CWSs to hotels, as well as the factors that guests value the most in traditional CWSs. Subsequently, to assess the legitimacy of these information for city hotels, qualitative data was collected through interviews with city hotel general managers, to obtain an administrative perspective on the most important advantages and relevant attributes of hotel CWSs.

Conducting this study by means of interviews with general managers was believed to be appropriate, as some co-workers' preferences may not be possible to offer, due to resources or budget constraints. Accordingly, this method allowed to combine general managers' perspectives and existing literature regarding the advantages of CWSs, as well as co-workers' preferences in CWSs, aiming to find an optimal combination of features offered, allowing to enhance customer experience and satisfaction while protecting profit margins of hoteliers.

The interviewed general managers were selected based on desk research for city hotels that offer co-working spaces (rated three or four-stars), aiming to obtain truly specialized insights. Following this, five focus-group interviews were conducted with Henrique Castro from Evolution Cascais-Estoril, Manuel Carneiro from Yotel Porto, Maria Taipa from Moxy Lisbon City, Nicola Accurso from 21 House of Stories Milan, and Sérgio Bernardo from Lumen Hotel Lisboa. The interviews were based on the following questions: "Do you believe CWSs in hotels are a good strategy?"; "What do you think are the advantages of having a CWS in the hotel?"; and "Which attributes do you think co-workers value the most in hotel CWSs?"

This number of focus group interviews was deemed to be appropriate, as previous studies have implied that a small number of participants for such interviews (i.e., five to eight) convey fitted results, due to the specificity of the discussions (Krueger and Casey 2000).

Finally, to analyse the data regarding the advantages of CWSs for hotels, a criterion was set where a stated benefit is only deemed as relevant if it was mentioned by most of the

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interviewees. When examining customer preferences for hotels' CWSs, the preferred attributes were considered to be the ones simultaneously mentioned by all managers, although features stated by most interviewees were also considered as relevant for hotel's CWSs to offer.

Results

Advantages of CWSs for City Hotels

All general managers mentioned the absence of a significant investment as the main advantage of establishing a CWS in hotels, considering that the essential parts of CWSs, namely tables, chairs and HSIA, coincide with their core amenities. Secondly, it was mentioned that CWSs help hotels to balance the seasonal demand, by attracting co-workers during off-peak periods, generating a new demand for hotels, namely the rising community of remote employees and the rising number of co-workers who seek time flexibility in their workspace. Finally, respondents emphasised that the existence of a pleasant atmosphere full of co-workers entices individuals to enter and get to know the hotel, possibly generating income opportunities.

Preferred Attributes

All general managers considered the following attributes as the most important in CWSs. Firstly, HSIA is considered guests' preferred attribute in CWSs, as city hotels' co-workers value the ability of working smoothly, without interruptions. Secondly, it is essential to provide comfortable spaces to co-workers, allowing them to simultaneously work and relax, while feeling like home. Additionally, power outlets, including USB and plug entries, spread throughout the CWSs, and diversity of spaces to work, namely meeting rooms, and outdoor CWSs areas, are crucial aspects, as these provide co-workers with more choice flexibility regarding their work location. Co-workers also appraise the sense of community retrieved from frequenting CWSs, as these promote networking opportunities, incentivizing people to share professional experience and advice. Such sense of community amongst co-workers can also be fostered with the organization of social and professional events/workshops, facilitating the

communication and interaction between workers. Finally, some general managers emphasized location and convenient accessibility as crucial attributes for co-workers.

Discussion and Implications

Advantages of CWSs for City Hotels

Confirming the findings of Butler (2022), the general managers mentioned that the main advantage of offering a CWS is the low investment required. As mentioned by Castro “We already provide lobbies with tables and chairs, and high-speed internet, meeting the main needs of co-workers.” Furthermore, interviewees stated that CWSs help hotels in coping with seasonal demand, as also detailed in the research of Calders (2020). Correspondingly, from Bernardo’s point of view “Offering CWSs allows the hotel to welcome co-workers throughout the whole year and thus break the seasonality of the hotel, leading to a spread demand.”

In accordance with the studies of Mariano (2019) and Vora (2019), general managers highlighted that offering CWSs widens the demand of city hotels, by taking advantage of the rising community of remote workers, who seek for more agile work location and schedule conditions. In fact, Carneiro, stated that “Hotels are already opened 24 hours, and thus are able to welcome co-workers at any time of the day, accommodating the needs of this new type of workers”. Consequently, hotels are able to house the large number of digital nomads in CWSs, standing out in an industry where there are few suppliers meeting the remote workers’ increasing demand for flexible, community-driven and convenient workplaces.

Lastly, general managers mentioned that, by frequenting such spaces and purchasing hotels’ goods and services, co-workers help to enhance revenues. Following this, by connecting visiting businesspeople, entrepreneurs, and local communities (Wich 2019), hotels provide a space for guests and locals to work and socialise (Mariano 2019; Pedrol 2018), ensuring that the lobby is full and is becoming more popular among locals and tourists. This aspect is confirmed by Taipa, who mentioned that “Even when the room occupancy is low, the lobby is

always full of non-guests' co-workers. This creates a good, popular ambience, and even attracts more people to get to know the hotel", which, according to Accurso, "Providing CWSs will help to improve hotel brand awareness."

Preferred Attributes

Studies conducted regarding user preferences in CWSs have not included in their research HSIA and power plugs, which can be explained by the fact that co-workers already take such aspects for granted. Moreover, when frequenting CWSs, individuals want to benefit from technologies similar to those they own at their homes, or that are commonly available in other public places, namely coffee shops and restaurants (Jung, Kim, and Farish 2014). Accordingly, although both HSIA and power plugs are not expected to contribute to hotels' higher revenues, those were considered to be the most important technological attributes for co-workers in city hotels' CWSs. Moreover, similar to the results of Sanborn (2015), physical attributes of CWSs were found to affect users' satisfaction, enhancing their revisit intentions. In fact, study results suggested that co-workers look for comfortable places, with a modern and professional layout, as they highly value space atmosphere and aesthetics. As stated by Carneiro "It is crucial that CWSs have a comfortable atmosphere, recreating a home-like environment, to foster workers' creativity." Accordingly, to attract and retain co-workers, city hotels' CWSs should have an inspiring and creative ambience, with homelike characteristics (Weijs-Perrée et al. 2018).

Moreover, the result that co-workers value diversified CWSs is in line with a study from Weijs-Perrée et al. (2018). For hotel CWSs' users, it is imperative that these offer a combination of both open and closed workspaces, to allow different types of events and workshops, and giving workers an enlarged range of possible work locations and settings. As stated by Bernardo, "Inside the hotel, we offer several and different CWSs, including an outdoor co-working patio, which digital nomads really enjoy." Moreover, a single, fully open-plan CWS can be too noisy and lack privacy (Kim and de Dear 2013). Considering this, co-workers value

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a space which offers both event and open spaces, as well as meeting and concentration rooms, balancing users' needs of interacting with other co-workers, and silently focusing on their duties (Sykes 2014). As claimed by the general managers, these meeting rooms can be equipped with work-related appliances, namely TV and HDMI cables, presentation equipment, ergonomic furniture, computers, and printers, as also stated by Kashyap (2019) and Noori (2022), adding value to the co-workers' experience.

Furthermore, in accordance with studies from Capdevila (2015) and Merkel (2015), the present research demonstrated that co-workers value a space where they feel part of a community, benefiting from networking opportunities. In fact, this sense of community is the differentiator between CWSs, and other multi-tenant and home offices (Weijs-Perrée et al. 2016). As part of such community, the present study also showed that co-workers prefer a space that attracts a diverse group of tenants, supporting the results of Weijs-Perrée et al. (2018). This allows users to leverage contacts and share ideas and knowledge with other co-workers. As Carneiro declared, "People value a space where they can share professional experience and collaborate with co-workers from other companies and businesses. It is important for foreigners to feel that they are working in a space that allows them to meet local companies and projects." Thus, in conformity with Sanborn (2015), the possibility for advice-seeking and -giving is significantly related with user satisfaction. Following this, social and professional events at CWSs are important for workers' experience in these spaces as, similar to a study of Capdevila (2015), such occasions promote relationship building and collaboration amongst individuals. From Carneiro's perspective "For the community, the organization of events represents major opportunities for workers to connect with other professionals and share knowledge. Above that, such initiatives strengthen the hotel's visibility within the co-working community."

Moreover, similar to the results of Weijs-Perrée et al. (2018) and Tan and Lau (2020), the outcomes of this study indicated that a centrally located space, accessible by car and/or public

transportations is highly sought-after by co-workers. Accordingly, users highly rate convenience, derived from a strategic location close to amenities.

Contrarily to the studies of Weijs-Perrée et al. (2018) and Tan and Lau (2020), four out of five of the general managers considered for this analysis did not express any information regarding the importance of leasing attributes when asked for the features that hotel co-workers value the most. A possible explanation for this is that, unlike most traditional CWSs, hotel CWSs are generally free, which was observed in the hotels the interviewed general managers work for. Accordingly, co-workers that use such spaces take this cost-free feature as a standard procedure, thus not being an essential nor a differentiator hotel CWS characteristic. Nevertheless, for Nicola Accurso, adding value to the co-workers' experience by offering membership packages can also be seen as a tool to distinguish from other hotel CWSs, enhancing users' satisfaction (Tan and Lau 2020).

Additionally, the availability of an advanced building access system and online registration system, as proposed Anderson (2022), Coworkers (2022) and Kashyap (2019), were not disclosed by general managers as important attributes for hotel CWSs. This can be explained by the fact that CWSs are not hotels' core business, but rather an hotel offering to complement their service, meaning a low budget allocation to it.

Theoretical Implications

Theoretically, this study makes major contributions for both the CWS and hotel industries. The present research has a disruptive character, as, to the best of the authors' knowledge, it is the first study aiming to confirm the advantages for hotels of offering CWSs, as well as to uncover customer preferences regarding CWSs in hotels, specifically, in city hotels. Accordingly, this study unprecedentedly suggests a framework containing co-workers' preferences for hotels' CWSs, allowing general managers to infer from it precise measures to enhance customer experience and satisfaction in such spaces. Finally, the methodology used to

attain the proposed study objectives is similarly innovative, considering the lack of studies that focus on gathering a supply-sided qualitative perspective.

Practical Implications

This study offered new insights into the advantages to hotels of offering CWSs, as well as users' preferences regarding the characteristics of such spaces, providing general managers with practical recommendations for their offering.

Firstly, nowadays, the new working culture allows for more space and time flexibility, leading to the creation of a new trend, namely the increased demand for CWSs. Following this, general managers should consider tackling this new business opportunity, considering that investing in CWSs requires a low investment, as study results indicate. Furthermore, by offering CWSs, hotels can benefit from attracting local workers and digital nomads, in the end leading to possible beneficial income returns from other business units. Moreover, this enables to balance off-peak demand by filling the hotel facilities, hence enhancing the brand awareness and reputation. Overall, this study shows that the offer of CWSs enables a differentiated guest experience and thus should be incorporated in hotels' strategy.

Furthermore, while offering CWSs has proven to be beneficial for hotels, it is imperative that hoteliers do not lose sight of their main target, namely the accommodated guests. Accordingly, the comfort of hotel guests should be prioritized and maximized. To achieve this, while managers should organize events, workshops and offer CWSs to customers, some of these should be restricted to hotel guests only, thus providing them with a sense of exclusiveness and personalized service. This should be complemented with other diverse CWS sites, including outdoor and indoor areas, where guests, who are mostly foreigners, can work along with non-guests, mostly locals, promoting a sense of community and creating network opportunities. Moreover, such places should excel in interior aesthetics, prevailing in modern and professional layout, where workers can feel comfortable while working. As part of this variety and design

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of CWSs, there should be available both meeting and concentration rooms, equipped with value-adding technologies, for instance, printers, computers, and presentation equipment, creating a sense that workers can access all the amenities they might need. On top of that, both HSIA and power outlets are a necessity, as those compound the essential attributes for users to smoothly perform their tasks.

Finally, regarding the CWS fee, hoteliers should combine users' desirability for a free space, as well as the more valuable membership plan, offering both options. The free plan may be more suitable for users who just want to work for a short amount of time, generating revenues for the hotel through food and beverage, while different membership programs might be more advantageous for those who intend on working for a full day, or even on an ongoing basis. Nonetheless, even in the free CWS option, hoteliers should charge users in case they want to occupy the meeting rooms, due to their high demand for other occasions, namely corporate meetings and conferences, which generate larger revenues. Additionally, hotel CWSs should be strategically located within the city, near public transportation and pertinent amenities, which allow hoteliers to incorporate in the membership plan possible relevant partnerships with such amenities, benefiting both the parties.

Conclusion and Future Research

More concerned with a proper work-life balance, a new generation of workers who seek for further independence over their work site and schedule has emerged. Adhering to remote work practices, such workers highly demand CWSs as, differently from other multi-tenant and home offices, these spaces allow for community building and professional collaboration. Considering this trend, city hotels have been expanding their service into offering CWSs, taking advantage of their central location, and aiming to differentiate from competitors.

Despite the rising number of CWSs, limited literature exists on users' desired characteristics for such sites, and there are no studies regarding user preferences specifically

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for city hotels' CWSs. Accordingly, this study reviewed existing literature regarding the advantages of CWSs for hotels, as well as the factors that customers value the most in traditional CWSs. To test the validity of this information for hotels, qualitative data was collected through interviews with city hotel general managers, to obtain an administrative perspective on the topics, while inspecting guests' technology desirability for such spaces. Resultantly, offering CWSs was proven to be an appropriate strategy for hotels, as it requires a low investment and augments demand and revenue streams. For this to hold true, hotels must provide certain desired attributes, namely, HSIA and power outlets; diverse, comfortable and technology equipped CWSs; opportunity for community building and networking interactions through events; and a central, accessible location.

This study ended with a practical guide on how hoteliers can enhance the customer experience and satisfaction in hotels' CWSs, increasing profitability.

Limitations and Future Research

Despite the theoretical and practical implications, the present study encounters some limitations. Firstly, the majority of interviewed general managers work in hotels located in Portugal, with just one working abroad, in Italy, which may affect the general applicability of results. In addition, preferences for CWSs' attributes may vary according to users' business sector (Remøy and Van der Voordt 2013), as well as their individual characteristics and demographics (Rothe et al. 2011), which were not considered in the present analysis.

Considering this, future studies can entail a qualitative analysis, with general managers from different countries, due to differences in culture and society, providing more faultless findings. Furthermore, to infer about differences in preferences for CWSs, future studies can enclose a quantitative analysis, examining users' perspective, from both guests and non-guests.

General Conclusions and Recommendations

The present comprehensive paper adds to existing literature, by exploring the impact of technology in all steps of the customer journey, through four distinctive studies, focusing on city hotels, rated three- or four-stars. Firstly, technologies and factors that influence customer decision when booking their stay were investigated. Secondly, a study was conducted to understand which technologies should be implemented in hotel facilities to enhance customers' stay experience and satisfaction. Thirdly, a study regarding retention strategy was administered by analysing and determining which factors lead to guest loyalty, while inspecting the role of technology within this context. Finally, a study concerning CWSs in hotels was formulated, aiming to analyse the advantages of such spaces for hotel businesses, and guests' preferences regarding CWSs' characteristics.

Following this, and conjointly considering all these topics, the present chapter discloses some general conclusions.

Personalized Service is Important in City Hotels

City hotels are often characterized as transit hotels, as they target both business and leisure guests who seek short-term accommodation. Despite travellers' intent for a brief stay, this paper demonstrated that personalized service is essential to enhance the experience and satisfaction of city hotel guests.

Firstly, guests prefer to search for and book hotel stays through OTAs. In fact, by being able to select their main preferences, namely location, room quality and price, individuals are contemplated with a more personalized list of hotels, tailored to their needs. Considering this, it would be relevant for hotels to utilize these research words when describing their hotel on OTAs, ensuring that the hotel shows up on top of the research results when individuals look for hotels online. Moreover, hoteliers should have a database to collect guests' preferences during

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their stay, in order to plan their OTA marketing strategy accordingly. Ultimately, hotels would be reinforcing a customer-centred strategy.

After the booking process, during the hotel stay, guests want to feel unique and special, expecting high standards of customer service. Technologies play a crucial role in this, by enabling a personalized guest experience. Study results revealed a high level of importance posed to a hotel mobile app, which should thus be implemented by hoteliers. This is a technology in which guests can add their preferences, allowing hotels to prepare the guests' stay accordingly, for instance, by assigning them to their preferred rooms, complementing the rooms with requested products, or even surprising guests with presents in case it is their birthday. Furthermore, the app stores these preferences in a database, which then could be used in a future stay, anticipating guests' preferences, and personalizing their experience, going the extra mile.

In order to further personalize and centralize customer experience, a loyalty program should be developed and incorporated into the mobile app. This program allows registered guests to convert their purchases into accumulated points, which could be spent on the services of the hotel or its partners. On top of that, the larger the amount spent by program guests, the higher the tier they reach, corresponding to increased rewards. To successfully build such loyalty program, advanced analytics must be used to collect customer data, including guest demographics, behaviours, and preferences, generating an accurate guest profile, which can be used by hoteliers to tailor the offers and rewards in the loyalty program accordingly. In the case that the city hotel belongs to a hotel chain, the loyalty program should operate across the whole chain, generating higher flexibility and customer satisfaction. Lastly, the customer information gathered by advanced analytics should be available to the hotel staff, so that they identify the guests in the different tiers of the program and are more attentive towards their needs, making them feel recognized and special. All things considered, loyalty programs offer service personalization related to different program statuses, implying that guests in the upper tiers are

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being more honoured due to their higher spending in the hotel. Quality service and loyalty programs engendered by the mobile app are thus essential tools to leverage personalization, which positively impacts guests' intentions to return to the hotel and recommend it, as proved in this paper.

Finally, to personalize the experience in hotel CWSs, it is advised that hotels extensively conduct market research, through questionnaires targeting their CWSs' users, collecting information regarding demographics, business field, and occupation. This would be advantageous for hotels to be aware of the needs and preferences of customers, allowing them to organize events in the CWSs accordingly. Exemplifying, hotels could invite guest speakers from the same business field as most of the co-workers, meeting their specific likings and establishing an environment where they feel understood and socially connected with the hotel. Furthermore, hoteliers could use this data to generate membership plans, by adding to the package services and partnerships which are more likely to be appreciated and valued by those specific CWSs users. Accordingly, market research in CWSs allows service personalization, enabling city hotels to achieve a greater customer-service fit, thus enhancing the valued sense of community among users.

Combination Between Technology- and Human-based Services Must Be Optimal

Although technologies play a big role in enhancing personalized service for guests, and bring benefits for both guests and hoteliers, hotels must balance the combination between technology-based self-services and human interaction services.

Firstly, despite the fact that customers prefer OTAs over traditional travel agencies, guests still value other individuals' opinion, particularly those of past customers and the experience of friends and family. Consequently, favourable word-of-mouth plays a crucial role in influencing customers' decision of where to stay at. Considering this, hotels must individually respond to guests' online comments and connect with them through OTAs. This would be a beneficial

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marketing strategy since potential customers can observe how thoughtfully and personally hotels interact with their guests, which hence influences their decision to book that hotel in the future.

For guests entering a hotel, first impression is key, as it will be a precedent for the rest of the stay. As guests value and prefer direct interaction with the employee when checking-in, hotels should friendly welcome guests at the front desk. Nevertheless, as guests get more comfortable at the hotel, they want to enjoy their stay to the fullest, looking for a seamless and convenient experience. This is possible though the usage of technology-based self-services, which enable guests to swiftly produce the service independently of direct employee interaction. The development of the previously mentioned mobile app would be a faultless solution, allowing guests to use their smartphone as room key, in place of carrying a key or a plastic card, and to control room functions, namely the lights, AC, TV, among others. Additionally, the mobile app provides a smoother process of ordering room service, or other hotel services, as guests can look for the menu and request the service in the same site, also enabling for an automatic payment. Moreover, in the case guests have any problem, it is possible to directly contact the reception through a chatbot. Furthermore, the mobile app can work as a repository of hotel information, and can even include additional relevant information for guests, namely local events and restaurants, and the meteorology, which guests can consult anywhere and at any time. Finally, and most importantly, through the mobile app customers can also do the check-out process, ending their experience smoothly.

In addition, the present paper demonstrated that a human-based, high-quality service is singularly the most important factor to generate guest loyalty. Therefore, the hotel's staff should deliver a reliable, assuring, empathetic, responsive, and professional performance. Nevertheless, this single category is not sufficient to explain all the variation in guest loyalty. Accordingly, it is also relevant that city hotels provide several technology-based services, such

as operational and in-room technologies, as well as self-check-in and check-out services, which prompt a sense of convenience, autonomy, greater flexibility, and fun. Therefore, both human interactions and distinct technology self-services should be offered by hoteliers, allowing guests to have the same service completed through a variety of options, enabling them to level their stay according to their needs. For instance, the implementation of the mobile app should not substitute but rather complement the already available options for the different service encounters, namely the front desk, for guests to do the check-in, check-out, or even ask for any additional information; the electronic locking system, for guests to enter the hotel room; the control panel, allowing guests to control room functions; and room phone to order room service.

In CWSs, the balance between technology and human services is also crucial. On the one hand, HSIA, and power plugs are the most important attributes for users to have in hotel CWS, providing them a productive and smooth work experience, similar to the one they would have at home. On the other hand, co-workers also value the interaction and relationship building with workers from different backgrounds that such spaces provide. Therefore, it is relevant that city hotels organize events and workshops, to stimulate networking opportunities and knowledge creation between co-workers, building a community between them.

Offering a Unique Product to Generate Differentiation is Imperative

Along with the above-mentioned recommendations, it is crucial that hoteliers can find their points of difference.

As mentioned throughout the present paper, technologies can work as a differentiator factor for hotels. Thus, a hotel able to swiftly deploy the latest technologies in its facilities would gain a reputation for being innovative, distinguishing itself from competitors. Moreover, such technologies would provide guests with an immersive, unique, and exclusive technological stay, enhancing their overall experience. As a result, hotels that hold these characteristics ought to base their marketing campaigns on the advertisement of such technological aspects, actively

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promoting disruptive technologies and presenting engaging and innovative content consistent with the hotel's brand identity. This could be done, for instance, by showing in the OTAs or hotel website high-quality photos of the smart-technology amenities offered, given that pictures are a key technological content for customers when deciding whether to stay at an hotel, as demonstrated in this paper.

As studied in the present paper, another tool to create differentiation are loyalty programs. Thereby, a city hotel is able to distinguish itself from competitors through diverse dimensions of the offered program, namely through its intuitive and fun gamified design, relevant and unique portfolio of compelling benefits, and exclusive partnerships with other companies. The singularity of such dimensions conveys an idea that the guests in that specific hotel are given a desirable, inimitable, signature experience, not attainable anywhere else. Accordingly, it is suggested that hotels study and keep pace with the partnerships and benefits being offered by competitors, allowing to establish collaborations and creative rewards not being offered elsewhere.

Finally, city hotels should invest in CWSs as a marketing diversification strategy and a crucial differentiator, capitalizing on remote working trends. By advertising these spaces on CWSs-specific websites, hotels would have access to a new marketing channel, thus covering an omnichannel strategy and expanding their reach. Additionally, these give guests a more convenient experience, by allowing them to check the CWS's availability. Lastly, city hotels might stand out from the competition by organizing *ad hoc* events. These CWS's events should be specifically offered considering users' unique preferences and characteristics, additionally attracting locals and tourists with similar interests, and building an exclusive community.

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Appendix

Appendix Chapter III

Figure 1: Consumer Decision Journey Model, by McKinsey & Company

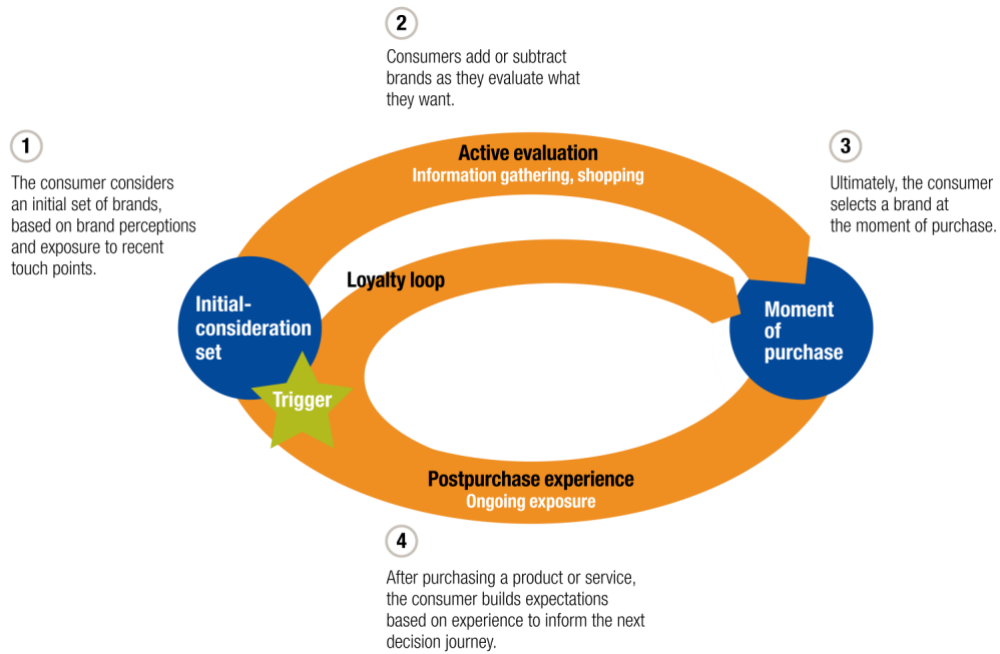


Figure 2: Proposed Conceptual Framework

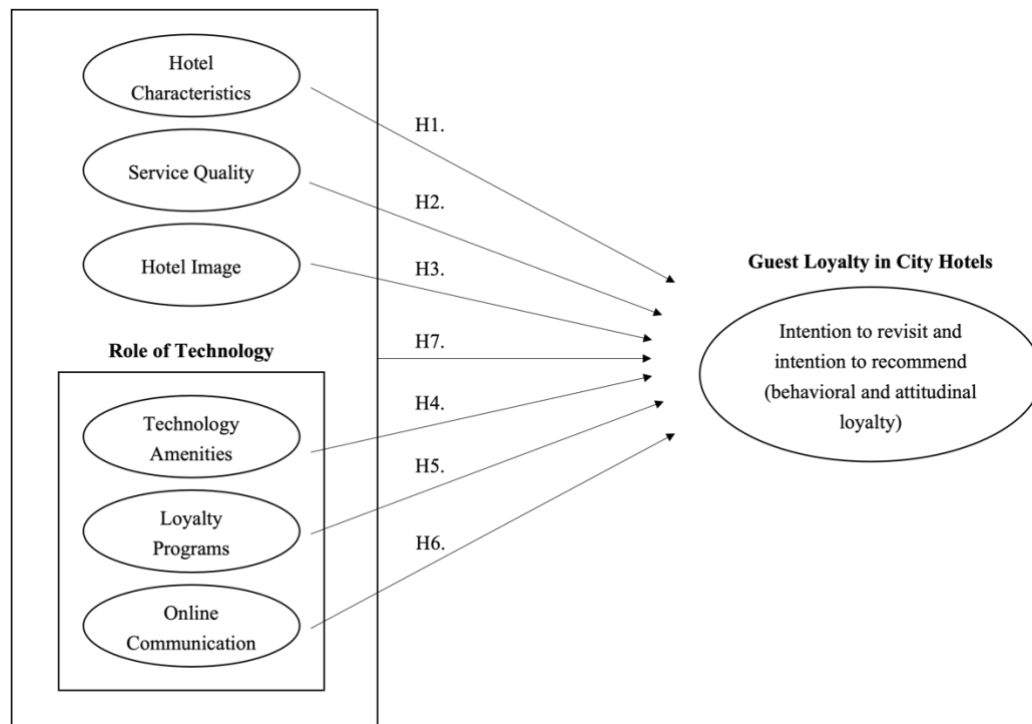


Table 1: Identified Categories and Attributes Linked with Guest Loyalty in Hotels

Category	Attribute	Attributes choice based on
Hotel Characteristics	(1) Food and Beverage	List of features highlighted by Kim and Han (2022) as being pivotal for guest loyalty
	(2) Hygiene and Cleanliness	
	(3) Diversity of Hotel Facilities	
	(4) Availability of Co-Working Spaces	
	(5) Value for Money	
	(6) Location and Accessibility	
	(7) Availability of Multiple Locations	
	(8) Traditional Reception	
Service Quality	(9) Reliability of Staff	Dimensions of the SERVQUAL model of service quality, namely reliability, assurance, empathy, responsiveness, and tangibles (Parasuraman, Zeithaml and Berry 1988)
	(10) Assurance of Staff	
	(11) Empathy of Staff	
	(12) Responsiveness of Staff	
	(13) Professional Look of Staff	
Hotel Image	(14) Hotel and Facilities' Layout	Functional and emotional dimensions of brand image (San Martín and Rodríguez del Bosque 2008; Giraldi and Cesareo 2014)
	(15) Hotel Reputation	
	(16) Guest-Hotel Value Congruity	
	(17) Emotional Connection	
Technology Amenities	(18) In-room Control Panel	List of technologies highlighted by Margarido (2015), as being relevant for guest experience and satisfaction
	(19) Universal Battery Charger	
	(20) In-room Game Console	
	(21) In-room Tablet	
	(22) In-room AI-powered Voice Assistant	
	(23) Interactive TV	
	(24) Virtual Concierge	
	(25) Robot Concierge	
	(26) Technology-equipped Working Spaces	
	(27) Mobile Phone App	
Loyalty Programs	(28) Self-check-in and -out Kiosks	Functional, psychological, and external dimensions of loyalty programs (Xie and Chen 2014)
	(29) High Speed Internet Access	
	(30) Fairness and Ease of Use	
	(31) Special Recognition according to Status	
Online Communication	(32) Relevant Partnerships	Most relevant aspects of online communication strategy, as mentioned by Casado, Artal-Tur, and Tomaseti (2019) and Tatar and Eren-Erdoğan (2016)
	(33) Presence in Social Media Pages and Clear Website	
	(34) Online Interaction	
	(35) Personalized Emails and Offers	

Appendix 1: Online Questionnaire Structure and Rationale

Context: The survey was created using Microsoft Forms, and its link was shared in November 2022 through the biggest social media platforms (WhatsApp, Facebook, and Instagram) (Statista 2022b).

Introduction

Hi! My name is Leonor, and I am currently doing my Master's in Management at Nova SBE. To complete it, I am writing a thesis regarding the factors that drive loyalty in city hotels, while understanding the role of technology in this context. By completing this survey, you would be helping me gather information for my study. It will take approximately 5 minutes, the survey is completely anonymous, and the data provided is confidential and will not be shared.

Section one

1. Have you been to a city hotel in the last 4 years (rated three- or four-stars)?
 - a. Yes
 - b. No

If answered no, the questionnaire is over. If answered yes, the questionnaire continues.

2. What was the main purpose of the stay?
 - a. Business
 - b. Leisure
3. Considering your experience, please rate the following statement on a scale from 1. to 5. (1= strongly disagree, 5= strongly agree or you have already revisited a city hotel)

STATEMENT	1	2	3	4	5
I would stay again in this hotel and recommend it to other people					

Section one reasoning: Question 1. was used to get more precise data, filtering responses by asking whether respondents had been to a city hotel in the last four years. This time frame was chosen following the findings of Bilgihan, Cobanoglu, and Miller (2010), which stated that studies related to technology must be replicated every two years, due to the existence of new technological breakthroughs. Nevertheless, this would set the time limit for visiting city hotels to the beginning of 2020, when the World Health Organization declared COVID-19 as a public health emergency, giving rise to worldwide lockdown measures and travel restrictions (World Health Organization 2020). Consequently, the time limit for visiting city hotels was extended for two additional years before COVID-19, resulting in a time frame of four years. Following question 1., for the study, there were only considered as valid answers those from participants who had been to a city hotel, rated three- or four-stars, in the last four years.

Question 3. aimed to examine participants' loyalty level through a five-point Likert scale, where 1= strongly disagree, represents an extremely low loyalty level; and 5= strongly agree, represents an extremely high loyalty level.

Sections two to seven:**Directions:**

Considering your experience, please rate the extent to which the following characteristics impacted your feelings of loyalty to that city hotel.

[In other words, the extent to which each characteristic was responsible for you already having returned/wanting to return to that city hotel, as well as for having recommended/wanting to recommend that hotel to other people]

1= very unimportant in developing feelings of loyalty

3= neutral

5= very important in developing feelings of loyalty

Section two: Influence of Hotel Characteristics on City Hotels' Loyalty

<i>STATEMENT</i>	1	2	3	4	5
Hotel offers high-quality, diverse food and beverage, and the eating area has an appropriate schedule					
The hotel has a good housekeeping department, is clean and follows hygiene regulations					
The hotel has multiple and diverse facilities, e.g., fitness centre, spa, pool, rooftop, ...					
The hotel offers Co-Working Spaces, including meeting rooms, shared and private work rooms					
The hotel offers an appropriate balance between cost and quality					
The hotel is properly located and is easily accessible by public transports					
The same hotel brand is available in multiple locations, across different cities and countries					
The hotel has a front desk, meaning a traditional reception, that works efficiently					

Section three: Influence of Service Quality on City Hotels' Loyalty

<i>STATEMENT</i>	1	2	3	4	5
Hotel staff continuously performs the promised service accurately					
Hotel staff is knowledgeable and able to convey trust and confidence					
Hotel staff is friendly, willing to help customers and knows each customer's individual needs					
Hotel staff responds quickly to customer questions and concerns					
Hotel staff looks professional, groomed, and neat					

Section four: Influence of Hotel Image on City Hotels' Loyalty

STATEMENT	1	2	3	4	5
The hotel and its facilities are well-designed and visually appealing					
The hotel has a strong reputation, and thus you trust the brand/chain					
The hotel's values reflect guests' identity and personal values					
You associate the hotel with the celebration of special dates and moments in your life					

Section five: Influence of Technology Amenities on City Hotels' Loyalty

STATEMENT	1	2	3	4	5
The hotel offers an in-room control panel to control room functionalities, e.g., lights, temperature, ...					
The hotel has universal battery chargers to lend					
The hotel has in-room game consoles, e.g., PlayStation					
The hotel has in-room tablets, e.g., to order/book hotel services and control room functions, ...					
The hotel has an in-room AI-powered voice assistant (i.e., Alexa, Siri, ...)					
Rooms have an interactive TV, e.g., to control room functions, order room service, ...					
There is a virtual concierge, i.e., touch panel in the lobby to provide information about the city					
There is a robot concierge, i.e., a robot to carry luggage, provide room service, ...					
The hotel offers technology-equipped working spaces, e.g., with video conference, printers, ...					
The hotel has a mobile phone app, allowing guests to check-in/-out, control in-room functions, order room service, ...					
There are self-check-in and -out kiosks					
There is high speed internet access throughout the hotel					

Section six: Influence of Loyalty Programs on City Hotels' Loyalty

<i>STATEMENT</i>	1	2	3	4	5
The hotel offers a fair, easy-to-use, good loyalty program where I can earn points on each stay and then I can get discounts or other benefits on my next stays					
There are special recognition, privileges and exclusive promotions offered to members of the loyalty program. The hotel knows the loyal members and offers a more personalised service to them					
The loyalty program has a variety of relevant partnerships, namely with tourist attractions and airlines, e.g., allowing me to earn airline miles					

Section seven: Influence of Online Communication on Loyalty

<i>STATEMENT</i>	1	2	3	4	5
The hotel has a clear website and a strong online presence on several social media pages, providing active and updated posts					
The hotel keeps in touch with guests through online interactions, allowing them to post comments and responding to them					
The hotel sends me personalised emails and offers					

Section eight: Demographics

1. Gender
 - a. Female
 - b. Male
2. Age group
 - a. 18 to 25
 - b. 26 to 41
 - c. 42 to 57
 - d. 58 to 67
 - e. 68 years and older
3. Education (last completed)
 - a. Less than High School
 - b. High School Degree
 - c. Bachelor's Degree
 - d. Master's Degree
 - e. Doctoral Degree
4. Nationality

Section eight reasoning: The variable “age” was categorized in generations following Beresford Research (2022) classifications, meaning that, as of 2022, individuals aged 18 to 25 are from Generation Z, 26 to 41 are Millennials, 42 to 57 are from Generation X, 58 to 67 are Baby Boomers, and 68 years and older are Boomers I.

Table 2: Demographic Characteristics of Respondents ($N = 128$)

Variable	Category	Frequency	Percentage
Travel Purpose	Business	31	24.2
	Leisure	97	75.8
Gender	Female	80	62.5
	Male	48	37.5
Nationality	Egypt	1	0.8
	Germany	2	1.6
	Italy	3	2.3
	Malaysia	1	0.8
	Mozambique	1	0.8
	Nepal	1	0.8
	Neatherlands	1	0.8
	Portugal	113	88.3
	Switzerland	1	0.8
	United Kingdom	3	2.3
	United States of America	1	0.8
Age Group	Generation Z: 18 to 25 years	35	27.3
	Millennials: 26 to 41 years	17	13.3
	Generation X: 42 to 57 years	59	46.1
	Baby Boomers: 58 to 67 years	17	13.3
	Boomers II: 68 years and older	0	0.0
Education Level	Less than High School	0	0.0
	High Shool Degree	20	15.6
	Bachelor's Degree	37	28.9
	Master's Degree	66	51.6
	Doctoral Degree	5	3.9
Level of Loyalty toward a City Hotel	Extremely Loy Loyalty	0	0.0
	Low Loyalty	3	2.3
	Medium Loyalty	8	6.3
	High Loyalty	66	51.6
	Extremely High Loyalty	51	39.8
<i>Average Level of Loyalty: 4.3</i>			
Total:		128	100.0

Table 3: Results of the Exploratory Factor Analysis

Factor (Cronbach's alpha)	Factor Loading	Variance explained (%)	Eigenvalue
Factor 1: Service Quality ($\alpha = 0.918$)		20.430	6.946
Reliability of Staff	0.730		
Assurance of Staff	0.839		
Empathy of Staff	0.837		
Responsiveness of Staff	0.869		
Professional Look of Staff	0.843		
Factor 2: Operational and In-room Technologies ($\alpha = 0.850$)		15.035	5.112
In-room Game Console	0.742		
In-room Tablet	0.710		
In-room AI-powered Voice Assistant	0.805		
Interactive TV	0.734		
Virtual Concierge	0.650		
Robot Concierge	0.719		
Factor 3: Hotel Characteristics ($\alpha = 0.869$)		6.646	2.260
Hygiene and Cleanliness	0.682		
Diversity of Hotel Facilities	0.701		
Location and Accessibility	0.778		
Value for Money	0.731		
Food and Beverage	0.740		
Factor 4: Loyalty Programs ($\alpha = 0.877$)		6.163	2.096
Fairness and Ease of Use	0.831		
Special Recognition according to Status	0.852		
Relevant Partnerships	0.824		
Factor 5: Online Communication ($\alpha = 0.756$)		5.688	1.934
Presence in Social Media and Clear Website	0.705		
Online Interaction	0.845		
Personalized Emails and Offers	0.783		
Factor 6: Hotel Image ($\alpha = 0.722$)		4.442	1.510
Hotel and Facilities' Layout	0.790		
Hotel Reputation	0.807		
Emotional Connection	0.759		
Factor 7: Business-related Services ($\alpha = 0.828$)		4.222	1.436
Availability of CWSs	0.913		
Technology-equipped Working Spaces	0.800		
Factor 8: Self check-in and -out Technologies ($\alpha = 0.839$)		3.872	1.316
Mobile Phone App	0.682		
Self-check-in and -out Kiosks	0.821		
Factor 9: Technology Essentials ($\alpha = 0.705$)		3.429	1.166
Universal Battery Charger	0.796		
High Speed Internet Access	0.843		
Kaiser-Meyer-Olkin value = 0.760, Bartlett's Test of Sphericity Chi-square = 2341.775, df = 561, sig. < 0.001		Total: 69.928%	

Table 4: Results of the Simple Linear Regression Analyses

Model	Independent Variables	Unstandardized Coefficients		t-value	p value	Adjust R ²	F-value	Sig. F
		β	Std. Error					
H1.	(constant)	4.289	0.054	79.684	< 0.001	0.219	36.613	< 0.001
	F3: Hotel Characteristics	0.327	0.054	6.051	< 0.001**			
H2.	(constant)	4.289	0.052	82.210	< 0.001	0.266	47.089	< 0.001
	F1: Service Quality	0.359	0.052	6.862	< 0.001**			
H3.	(constant)	4.289	0.061	70.327	< 0.001	-0.003	0.667	0.416
	F6: Hotel Image	0.050	0.061	0.817	0.416			
H4.	(constant)	4.289	0.061	70.142	< 0.001	-0.008	0.01	0.979
	F2: Operational and In-room Technologies	0.002	0.061	0.026	0.979			
	(constant)	4.289	0.061	70.191	< 0.001	-0.007	0.178	0.674
	F7: Business-related Services	0.026	0.061	0.422	0.674			
	(constant)	4.289	0.061	70.314	< 0.001	-0.003	0.621	0.432
	F8: Self check-in and -out Technologies	0.048	0.061	-0.788	0.432			
	(constant)	4.289	0.061	70.203	< 0.001	-0.006	0.218	0.641
	F9: Technology Essentials	0.029	0.061	-0.467	0.641			
H5.	(constant)	4.289	0.058	73.735	< 0.001	0.088	13.238	< 0.001
	F4: Loyalty Programs	0.212	0.058	3.638	< 0.001**			
H6.	(constant)	4.289	0.060	71.009	< 0.001	0.017	3.134	0.079
	F5: Online Communication	-0.107	0.061	-1.770	0.079*			

Dependent variable: *Guest Loyalty toward City Hotels*

Significant at * $p < 0.10$, ** $p < 0.01$

Table 5: Results of the Multiple Linear Regression Analysis

Independent Variables	Unstandardized Coefficients			<i>p</i> value	Adjust R ²	F-value	Sig. F
	β	Std. Error	<i>t</i> -value				
(constant)	4.289	0.038	111.571	< 0.001	0.602**	22.311	< 0.001
F1: Service Quality	0.359	0.039	9.313	< 0.001**			
F2: Operational and In-room Technologies	0.002	0.039	0.041	0.967			
F3: Hotel Characteristics	0.327	0.039	8.472	< 0.001**			
F4: Loyalty Programs	0.212	0.039	5.506	< 0.001**			
F5: Online Communication	-0.107	0.039	-2.781	0.006**			
F6: Hotel Image	0.050	0.039	1.296	0.198			
F7: Business-related Services	0.026	0.039	0.671	0.504			
F8: Self-check-in and –out Technologies	0.048	0.039	-1.250	0.214			
F9: Technology Essentials	0.029	0.039	-0.743	0.459			

Dependent variable: *Guest Loyalty toward City Hotels*

Significant at ** $p < 0.01$

Table 6: Summary of the Results from the Linear Regression Models and Hypotheses Testing

Hypothesized Path	Coefficient	<i>p</i> value	Result
H1. Hotel Characteristics → Loyalty	0.327	< 0.001**	Accepted
H2. Service Quality → Loyalty	0.359	< 0.001**	Accepted
H3. Hotel Image → Loyalty	0.050	0.416	Rejected
H4. Technology Amenities → Loyalty	F2: 0.002	0.979	Rejected
	F7: 0.026	0.674	
	F8: 0.048	0.432	
	F9: 0.029	0.641	
H5. Loyalty Programs → Loyalty	0.212	< 0.001**	Accepted
H6. Online Communication → Loyalty	-0.107	0.079*	Rejected
H7. Hotel Characteristics, Service Quality, Hotel Image, Technology Amenities, Loyalty Programs and Online Communication → Loyalty	Adjust R ² : 0.602	Sig. F: < 0.001**	Accepted

Significant at * $p < 0.10$, ** $p < 0.01$