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## Hotels' Sustainability Practices and Guests' Familiarity, Attitudes and Behaviours

### Abstract

This study investigates the effects of hotel's sustainability practices in three areas of sustainability and familiarity with those practices on hotel guest satisfaction and loyalty in the Kazakhstan hotel industry. Using a structural equation modelling (SEM) and fuzzy-set Qualitative Comparative Analysis (fsQCA), findings reveal that social and environmental dimensions play positive roles on guests' satisfaction and loyalty while the economic dimension and familiarity are not significantly related to guest loyalty, although they are likely to improve guest satisfaction. Furthermore, results of the analysis of the necessary conditions to achieve the expected model outcomes indicate that all three sustainability dimensions are necessary for sustainability efforts to have the most positive effect on guest satisfaction and loyalty. Results also indicate that although familiarity alone is insufficient, its combination with the social dimension increases guest satisfaction and loyalty. Findings provide theoretical and practical insights into sustainability practices in the hotel industry.

**Keywords:** sustainability practices; loyalty; satisfaction; familiarity; hotels; Kazakhstan

### 1. Introduction

Arguably, sustainability is one of the most ideologically contested terms of recent times. Although there is no universally agreed definition of sustainability, it is generally regarded by intergovernmental organisations, policymakers and academics as the antidote to an array of problems facing societies, economies and the environment. While initial interpretations of sustainability were based on ecological principles, subsequent definitions offer a broader perspective by including social and economic dimensions alongside environmental goals in an effort to meet human needs in an equitable way (Jones et al., 2016). As the interest in sustainability grew over time, "sustainability has become one of business' most recent and urgent mandates" (Carroll and Buchholtz, 2012:4), with companies being increasingly pressured to promote the 'triple bottom line' approach (Elkington, 1997), where economic, social and environmental dimensions of sustainability are embedded into business strategies and practices (Han and Hyun, 2018b).

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Although the hotel industry has been somewhat slow to adopt the sustainability paradigm (Jones et al., 2016; Trang, Lee and Han, 2019), in recent years the concept has become “a defining issue” for hospitality companies (Deloitte, 2014:41). Indeed, in light of the impacts of hotels' operations on local communities and the environment (de Grosbois, 2012), calls for hotels to align their practices to sustainability principles have intensified (Xu and Gursoy, 2015a). In fact, due to increased consumer awareness (Font and McCabe, 2017; Han et al., 2018), the sustainability practices of hotels have emerged as an important determinant influencing consumer attitudes and behaviours (Han et al., 2018; Law et al., 2016) including satisfaction, loyalty and decision-making process (Berezan et al., 2013; Han and Hyun, 2018a; Modica et al., 2018; Teng et al., 2012), and, thus, having a significant impact on financial performance (Garay and Font, 2012). As such, a significant body of literature that investigates consumer perceptions, attitudes and behaviours towards hotels' sustainable practices has begun to proliferate (e.g., Berezan et al., 2013; Chen, 2015; Kang et al., 2012; Ponnareddy et al., 2017; Prud'homme and Raymond, 2013).

Nonetheless, a foray into extant literature reveals that the majority of past studies focused solely on one dimension of sustainability such as the environmental or social aspect (e.g., Namkung and Jang, 2017; Martinez and del Bosque, 2013). Only a handful of studies have investigated the effects of all three sustainability dimensions within hotel settings (i.e., Modica et al., 2018; Xu and Gursoy, 2015b). This is surprising considering arguments that all three dimensions of sustainability (economic, social and environmental) need to be embedded in the strategies and practices of hotels (e.g., Farmaki, 2018). The hospitality industry is multi-faceted and complex in nature, comprising of several stakeholders whose performances and relations are interdependent (Farmaki, 2018); thus, a consideration of various stakeholders is

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needed for the successful implementation of sustainable practices in hotels (Modica et al., 2018) including employees, customers and hotel itself.

Therefore, this study examines the effects of hotel's sustainability practices in relation to employees, customers and hotel itself on guests' behaviours and attitudes and, specifically, on guest satisfaction and loyalty which have emerged as the most predominant attitudinal and behavioural aspects in the literature. In addition, this study considers the role of guests' familiarity with hotels' sustainability practices, which has been largely overlooked in past studies. Furthermore, this study draws insights from the Kazakhstan hotel industry; thus, responding to calls for more research on emerging economies (Goa, 2009) and within Asian contexts (Chen and Peng, 2016). Indeed, past studies on sustainability in hotel industry have mainly focused on European (Modica et al., 2018) or American contexts (Xu and Gursoy, 2015b). Differences observed in previous studies between European and American consumers' attitudes and behaviours towards sustainability practices (Thompson, 2007) suggest that it is important to examine attitudes and behaviours of consumers from different geographical settings (Modica et al., 2018).

Sustainability and sustainable growth have been amongst the strategic priorities of all of the sectors of the economy in Kazakhstan, including tourism and hospitality (Marzhan, 2015). However, both the practices of the Kazakhstan hotels and pro-environmental behaviours of the Kazakh customers have been identified as areas of concern, recognised as not fully supportive of and integrated with the sustainability agenda of the country (Seilov, 2015). For example, independent hotels in major cities such as in Almaty and Nur-Sultan Astana, have only recently started to introduce the sustainable practices and customers awareness and familiarity of these practices stayed limited influencing their pro-environmental behaviours (Mussina and Bimerev, 2018). Thus, findings of this study are likely to make important

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theoretical and practical contributions to the advancement of existing knowledge on the influence of sustainability practices in the hotel sector on guest attitudes and behaviours.

This study evaluates both the sufficient and necessary factors that are needed to predict satisfaction and loyalty of hotel guests. Net effect of each predictor is investigated using SEM and sufficiency and necessity of the combination of predictors (i.e., causal recipes) is explored using fsQCA. Through identifying necessary conditions that are required to develop appropriate sustainability action plans by utilizing a combination the three sustainability dimensions with familiarity, findings of this study will provide invaluable insight for hotel managers to further improve their guests' satisfaction and loyalty. Gannon et al. (2019:245) noted that necessary conditions "are highly significant in terms of both theory and practice because without necessary predictors, the model outcome cannot occur and other predictors cannot play an alternative role in their absence". While previous research uses symmetrical analysis (e.g., SEM, regression, correlation) to identify sufficient factors affecting guest behaviours, there is a little knowledge of necessity of predictors of guests' satisfaction and loyalty. This is first empirical study that fills this research gap by investigating the conditions that are necessary to increase the satisfaction and loyalty of hotel guests through sustainability practices. Identification of the importance and necessity of the economic, social and environmental dimensions of sustainability as well as familiarity may help hotel managers properly allocate their scarce resources to meet the necessary conditions for attaining guest satisfaction and loyalty.

The rest of the paper is organised as follows. First, a review of the literature is provided to set the theoretical background of the study. Specifically, the importance of sustainability in hotels is explained before previous research is reviewed in terms of the impacts of hotel's sustainability practices on guests' behavioural and attitudinal responses. Then, the

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methodology adopted in this study is explained and justified before the results of the study are presented and discussed. Last, the implications, limitations and future research suggestions are drawn together as conclusions.

## **2. Theoretical Background**

### ***2.1 Sustainability practices in hotel industry***

Sustainability takes a long-term view of the future by considering ethical values and principles while endorsing responsible actions that incorporate environmental, societal and economic goals. The environmental dimension of sustainability aims at minimizing the negative environmental impacts brought about by hotel consumption through environmental monitoring (Vachon, 2007) and/or collaborative efforts including product redesign and greening of production processes (Tsai et al., 2011). The social dimension aims at enhancing the well-being of the employees, other suppliers, the guest and the local community at large (Gopalakrishnan et al., 2012) by providing appropriate training and a safe working environment (Vachon, 2007), fair trade (Schwartz et al., 2008) and establishing customer relations (Kleindorfer et al., 2005) and long-term partnerships (Farmaki, 2015) among others. Last, the economic dimension of sustainability involves the generation of profits and the growth of the company market share (Kassinis and Soteriou, 2003) while inflicting minimal social and environmental impacts.

It, thus, represents a balanced and holistic approach that recognizes the role of all stakeholders and both present and future generations' entitlement to the use of resources (Font and McCabe, 2017). As such, sustainability has become an imperative goal (McDonagh and Prothero, 2014), intensifying the push for legislation from governmental agencies as well as the responsible actions by industries and individuals since a true sustainability requires companies to ensure long-term profitability, the social welfare of their stakeholders such as

customers, suppliers and employees and the minimizing the negative impact of their activities on the environment.

In recent years, the concept of sustainability has gained currency within the hotel industry with businesses publicly committing to strategic corporate sustainability agendas (Jones et al., 2016). Nonetheless, questions have been raised over the motives driving the adoption of sustainable practices by hotels (Font and McCabe, 2017; Wymer and Polonsky, 2015). For example, it has been suggested that many of these sustainability programmes are adopted mainly because of the financial gains associated with cost-efficiency or attempts to enhance corporate image and build community relationships and employee loyalty through greenwashing activities (Font et al., 2012; Jones et al., 2016). Indeed, the profitability of companies has been found to improve as a result of sustainability practices adoption, which are assumed to positively influence consumer perceptions, attitudes and behaviours (Molina-Azorin et al., 2009). Considering the rise of consumer awareness of the importance of environmental-friendly and responsible consumption (Cronon et al., 2011; Seth et al., 2011), an increasing number of hotels are adopting sustainability practices (Moise et al., 2018).

## ***2.2 Effects of sustainability practices on guest behaviour***

A burgeoning number of studies have investigated the effects of sustainability on consumer behaviour (e.g., Chen and Tung, 2014; Gao et al., 2016; Kang et al., 2012; Lee et al., 2010; Olya et al., 2019; Verma et al., 2019), mainly focusing on 'consumer satisfaction' and 'loyalty', which are considered as the predominant attitudinal and behavioural aspects of sustainability. The overwhelming focus on these attitudinal and behavioural aspects is not surprising considering that consumer satisfaction and loyalty are clear indicators of a company's success in providing products and services efficiently.

### *2.2.1 Satisfaction*

Arguably, satisfaction emerges as the most widely investigated attitudinal trait by hospitality researchers (Cicerali et al., 2017). Defined as “a person’s feeling of pleasure or disappointment which resulted from comparing a product’s perceived performance or outcome against his/her expectations” (Kotler and Keller, 2006:144), satisfaction has been examined in relation to a number of factors including company profits and market share, customer repeat purchase intention and positive word-of-mouth behavior (Pizam and Ellis, 1999). While it represents an important construct in the mainstream management literature, in the hotel research domain satisfaction is of particular importance due to the specific characteristics of hotel products. Indeed, considering the perishable, tangible and intangible elements of hotel products, satisfaction emerges as the leading criterion for determining product and service quality (Hayes, 1998).

A large number of studies have also examined the effects of sustainability practices on guest satisfaction (e.g., Berezan et al., 2013; Lu and Stepchenkova, 2012; Park et al., 2016; Slevitch et al., 2013; Yu et al., 2017), concluding that guest satisfaction is positively impacted by the sustainability actions of hotels. More specifically, satisfaction was found to increase when companies adopted environmental-friendly practices (Gao and Mattila, 2014; Yu et al., 2017). Likewise, customer satisfaction emerges as a mediator between environmental practices and company financial performance (Kassinis and Soteriou, 2003). Indeed, the financial performance of companies acts as an indication of their ability to offer high quality services, which is a determinant of consumer satisfaction (Sanchez-Fernandez and Iniesta-Bonillo, 2009); hence, customer satisfaction may be an antecedent of company financial performance (Lo et al., 2015). As Sanchez-Franco et al. (2018) professed, satisfaction as an indicator of a service provider’s performance efficacy is a key measure of a hotel’s competitive advantage.

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Studies have also reported a positive relationship between satisfaction and social dimension of sustainability. For instance, high employee satisfaction was reported in companies where the management is concerned with the social welfare of their employees (Chi and Gursoy, 2009), which, in turn, leads to high customer satisfaction as satisfied employees are likely to perform better in their jobs (de Leaniz and Rodriguez, 2015). In the hotel industry, where there are a number of close interactions between employees and guests, the importance of employee satisfaction is particularly elevated.

### *2.2.2 Loyalty*

Loyalty emerges as an important construct in the hospitality literature since it determines future behavioural intentions and indicates guests' trust towards the company (Sipe and Testa, 2018). Defined as the strength of the relationship between one's relative attitudes and repeat purchase (Rather, 2018), customer loyalty reflects consumers' level of attachment to products and brands. According to Oliver (1999:392) customer loyalty is "a deeply held commitment to rebuy or patronize preferred product or service consistently in the future". Thus, customer loyalty is central to success of any business (Toufaily et al., 2013) as it may help companies build long-term mutually beneficial relationships with their clients (Kandampully et al., 2015; Pan et al., 2012) and protect themselves against competitors as loyal customers resist switching (So et al., 2013). Indeed, loyal customers are easier and cheaper to serve than non-loyal customers (Tepeci, 1999), and loyal customers are likely to pay more for a company's offerings (Evanschitzky et al., 2012).

In light of the growing guest interest on sustainability practices within the hotel industry, the influence of environmental, social and economic sustainability practices on customer loyalty has been examined extensively, with findings indicating a positive relationship. For example, companies' environmental-friendly activities have been found to

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enhance customer loyalty (Chen, 2015; Han et al. 2019; Lee et al., 2010) and contribute to company reputation (Jang et al., 2015), thus, positively influencing customer loyalty. Moreover, the social dimension of sustainability, such as employee welfare schemes, has been found to contribute to brand loyalty (Chi and Gursoy, 2009) as it increases the attractiveness of a company. Likewise, the economic aspect of sustainable actions of companies seems to contribute to consumer loyalty as it improves perceived product quality (Shi et al., 2014) and strengthens company reputation (Pena et al., 2013). Interestingly, customer satisfaction and loyalty have been found to be interrelated (Kim et al., 2013; Nunkoo et al., 2013b). Specifically, guests' satisfaction was identified as an antecedent of their loyalty (Gursoy et al., 2014) with Loureiro and Kastenholtz (2011) and Orel and Kara (2014) recognising the mediating effect of perceived quality between satisfaction and loyalty.

### *2.2.3 The role of familiarity*

The influence of consumer familiarity with a company or brand on behavioural aspects was considered within hospitality literature (e.g., Ha and Jang, 2010; Lin, 2013), albeit at a lesser extent. Defined as “the number of product-related experiences that have been accumulated by the consumer” (Alba and Hutchinson, 1987:411), familiarity with a product or brand arises from past experiences of using a product. Even though the terms ‘knowledge’ and ‘familiarity’ are often used interchangeably, the latter is considered as an umbrella term that encompasses consumer experience, prior knowledge and strength of belief (Ha and Perks, 2005). Generally speaking, familiarity is of strategic importance to company managers as it directly affects customer behaviour (Turkel et al., 2016). On the one hand, it is influential on customer satisfaction as different levels of familiarity provide customers different frameworks of reference for evaluating products (Soderlund, 2002; Tam, 2008). Indeed, if consumers are

unfamiliar with a brand, they may doubt its quality because they lack the information required to make an evaluation (Hoeffler and Keller, 2003). Hence, familiarity with a product reduces uncertainty in future purchase situations (Flavian et al., 2006). On the other hand, familiarity with a product increases the more frequently consumers use the product; therefore, it may be argued that familiarity with a company and its products is related to customer loyalty. According to Tepeci (1999) the more familiar a consumer is with a product/brand, the more likely he/she to purchase the product/brand.

Within the context of sustainability, familiarity with a company's economic, environmental or social practices has been previously studied. For instance, Bourke et al. (2020) argued that hotels promote their financial performances, earnings stability and share values in a way to manipulate the market. Hotels play this game to make their stocks more appealing to the stakeholders. Turkel et al. (2016) found that communication of environmental-friendly practices of familiar brands positively influences purchase intentions. Likewise, Perera and Chaminda (2013) suggested that brand familiarity plays a moderating role between a company's social responsibilities and product evaluation. On a similar note, Plewa et al. (2015) found that perceived familiarity with a company's sustainability actions may positively influence consumer perceptions of companies' sustainability image; thus, contributing to customer loyalty. Nonetheless, the role of familiarity of all three dimensions of sustainability on behavioural aspects has been largely overlooked, especially in relation to the hotel sector.

### ***2.3 Research aim***

This study aims to examine the effects of the hotels' economic, social and environmental sustainability practices on guest satisfaction and loyalty, by considering the role of guest familiarity with hotels and their suppliers' sustainability practices. More specifically, this empirical study aims to address three research questions. First, what are the sufficient factors

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(i.e., economic, social and environmental dimensions and familiarity) in order to increase satisfaction and loyalty of hotel guests? Second, under which conditions does hotel guests' satisfaction and loyalty emerge in relation to the above-named predictors? Third, what factors are necessary to attain satisfaction and loyalty among hotel guests? To answer the first research question, a SEM analysis was conducted to investigate the net effects of predictors on expected outcomes (satisfaction and loyalty). In response to the second research question, fsQCA was conducted to explore causal recipes leading to the expected outcomes of guest satisfaction and loyalty. The third question was addressed using necessary condition analysis that identifies the necessary conditions to ensure guest satisfaction and loyalty.

The multi-faceted nature of the tourism industry (Farmaki, 2018) calls for a holistic consideration of all stakeholders involved in the supply and delivery of the hotel product. Generally speaking, the hotel sector requires collaboration across the supply chain for the effective delivery of the hotel product (Xu and Gursoy, 2015a). Given the fact that hotel sector is one where there is high interaction among key parties and, in particular, between employees and guests (Wells et al., 2016), it is necessary to consider key stakeholders in the examination of sustainability practices as they all share the responsibility for their implementation in hotels. To this end, this study considered guest perspectives on the economic, social and environmental sustainability practices in hotels in relation to in addition to the hotel itself, customers and employees whose interactions are important for the success of sustainability (Farmaki, 2018).

### **3. Methodology**

#### ***3.1 Questionnaire design and measurement scales***

A self-administered survey questionnaire was used to collect data. All constructs were measured utilizing items adapted from previous studies (Casaló, Flavián, & Guinalú, 2008;

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Lee & Kwon, 2011; Xu and Gursoy, 2015). Following Xu and Gursoy (2015), the survey instrument was designed to measure guest's satisfaction, loyalty, and attitudes to environmental, social and economic sustainability practices. As presented in Table 1, social dimension of sustainability practices was measured by 11 items, environmental dimension by four items and economic dimension by five items. All of the items used to measure environmental, social and economic sustainability practices were adopted from Xu and Gursoy's (2015) study. Environmental sustainability measures included items related to product design such as energy and water saving, use of solar power and communication to customers. Social sustainability measures included items related to work environment, employee safety and wellbeing, and customer orientation, quality and information dissemination. Economic sustainability measures included items related to occupancy and revenue growth, competitiveness and market share growth. Customer satisfaction was measured by five items adopted from Caber et al. (2013) and Gursoy et al. (2015). Customer loyalty was measured by three items that were adopted from Chi, 2011 as presented in Table 1. Items for measuring familiarity were adapted from Casaló et al. (2008) and Lee and Kwon (2011). All items were measured on a 5-point Likert-type scale (1=strongly disagree, 5=strongly agree). Demographics of respondents including age, gender, education, and income levels were collected in the final section of questionnaire.

<Insert Table 1 About Here>

A back-translation method was applied to prepare the questionnaire in the Russian and Kazakh languages. A pilot study was conducted by inviting 15 guests to complete the survey to assess the understandability of the questions, the time taken for completion and to identify any other issues. These guests were the loyal business customers of the hotels identified by the

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hotel and marketing managers of the properties. The outcome of the pilot study was satisfactory and no revisions were necessary.

### ***3.2 Data collection***

The research access to the hotels and hotel guests was facilitated through the personal contacts of the local researcher. The research sample included Kazakh guests staying in 4 and 5 star independently owned hotels in Almaty. These hotels disclose their sustainable practices via their websites, brochures and flyers. Sustainable practices of the hotels cover wide range of areas including water usage; use of local producers as suppliers and waste recycling.

One of the researchers, fluent both in English and Kazakh languages, personally visited the hotels and run the survey with the guests by using face-to-face approach in order to boost up the response rate and also ensure that questions are clarified whenever it was needed. They were approached at the hotel lobby and invited to participate. Most of these guests were repeat guests visiting Almaty for business.

Using a convenience sampling method, 310 guests of hotels in Kazakhstan were directly approached from August 2017 to October 2017. A total of 220 completed survey questionnaires were returned (71.0% response rate). After removing the two incomplete questionnaires, 218 valid cases (70.3%) were retained for further analysis. The profile of the respondents is presented in Table 2.

<Insert Table 2 About Here>

### ***3.3 Data Analysis***

Before analysing the data to test the proposed relationships, the normality of data was tested and the Cronbach alpha score of each construct was estimated. Afterwards, a confirmatory factor analysis was conducted to assess the reliability, scale composition and the validity of the

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study measures. Construct validity (including convergent and divergent validity) and fit validity (standardized root mean squared residual-SRMR and Normed Fit Index- NFI) of the proposed model is evaluated (Taheri et al., 2019). Structural equation modelling (SEM) was then used to investigate the relationships between the constructs (social, economic, environmental and familiarity) and the effect on satisfaction and loyalty. As SEM is used to identify the net effect of dimensions on the outcome variables, a fuzzy-set Qualitative Comparative Analysis (fsQCA) was subsequently conducted to explore sufficient combinations of the dimensions called causal recipes, to predict the satisfaction and loyalty of hotel guests. fsQCA is set-theoretic approach that can generate new knowledge of sustainability of hotel management by exploring complex conditions leading to satisfaction and loyalty of hotel guests. fsQCA functions based on Boolean Algebra. It involves three stages of data calibration (transforming Likert scale data to fuzzy set data), truth tabulation analysis (computing all possible conditions leading to the expected outcomes) and counterfactual analysis (refining all possible conditions and selecting algorithms that consistently and sufficiently describe recipes for achieving the outcomes) (Olya et al., 2020). Two measures of 'consistency' and 'coverage' are used to refine algorithms calculated using fsQCA which are analogous to 'correlation' and 'determination coefficient', respectively (Olya & Mehran, 2017). Analysis of necessary condition was also performed to identify which dimensions are necessary to increase guests' satisfaction and loyalty. Unlike SEM and fsQCA that shows sufficient net and combination effects of predictors, Analysis of necessary condition reveals necessary predictor of the outcome (Gannon et al., 2019; Olya & Al-ansi, 2018; Olya & Han, 2020). This means that it is less likely to stimulate satisfaction and loyalty of guest in the absence of necessary predictors. Results of analysis of necessary condition helps hoteliers to focus on necessary predictors of satisfaction and loyalty of their guests.

## 4. Results

### *4.1 Measurement model testing*

Results of the test of normality of data, descriptive statistics, reliability and confirmatory factor analysis are presented in Table 1. Results of Skewness and Kurtosis confirm that data were normally distributed as Skewness and Kurtosis values fell within the recommend range of  $\pm 3$  (Han et al., 2019). However, Kurtosis value for three items exceed the cut-off 3. To address this issue, we used SEM because of its “ability to fit non-standard models, including flexible handling of longitudinal data, databases with autocorrelated error structures (time series analysis), and databases with non-normally distributed variables” (The Division of Statistics and Scientific Computation, 2012, P. 8). Means and standard division of the scale items were calculated and presented in Table 1. Results of Cronbach's alpha ( $\alpha$ ) and composite reliability (CR) scores were above recommended level of 0.70, providing satisfactory evidence for reliability of the measures. During the confirmatory factor analysis (CFA), one item from environment dimension (i.e. Develop an environmental policy) was excluded due to low factor loading. Other items significantly and sufficiently loaded to hypothesized factors ( $> 0.5$ ,  $p < 0.005$ ). Average Variance Extracted (AVE) was calculated to evaluate convergent validity of the constructs. Results of AVE showed that the constructs satisfied the recommended level of 0.50 (Khan et al., 2018).

Discriminant validity of the constructs were examined utilizing Fornell-Larcker Criterion and Heterotrait-Monotrait Ratio (HTMT) (Table 3). As presented in Table 3, the square root of AVE of each construct was larger than the correlation of all pairs of the constructs, which satisfied the Fornell-Larcker Criterion requirements for discriminant

validity. All HTMT values were less than 0.9, which provided further evidence of discriminant validity among study constructs. Results of standardized root mean squared residual (SRMR<0.08) met the accepted criteria for the fit of the proposed model with the empirical data (Hair et al., 2017; Henseler et al., 2015).

<Insert Table 3 About Here>

#### ***4.2 Structural model testing***

Direct effects of sustainability dimensions (social, environmental and economic) and guest familiarity with sustainability practices on satisfaction and loyalty are illustrated in Figure 1. According to the results, satisfaction was significantly and positively influenced by familiarity ( $\beta= 0.104, p<0.05$ ), the social dimension ( $\beta= 0.227, p<0.001$ ), the environmental dimension ( $\beta= 0.159, p< 0.01$ ) and the economic dimension ( $\beta= 0.284, p< 0.001$ ). Loyalty was also improved by the social ( $\beta= 0.196, p< 0.001$ ) and environmental dimensions ( $\beta= 0.144, p< 0.001$ ). There was no significant relationship between economic dimension and guest loyalty and none between familiarity and guest loyalty.

<Insert Figure 1 About Here>

#### ***4.3 Configurational model testing***

In order to further understand the implications of the mix of those three dimensions of CSR, fsQCA was conducted to identify the causal recipes. The results of this configurational modelling are presented in Table 4. According to fsQCA results, there were three causal recipes that explained the conditions for achieving guests' satisfaction (coverage: 0.957, consistency: 0.933). Model 1 indicated that a combination of the environmental and social dimensions offered the causal conditions that predicted guests' satisfaction. Findings further

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indicated that a combination (Model 2) of the provision of social and economic dimensions was also a significant determinant of satisfaction. Results of Model 3 indicated that the social dimension and the familiarity of guests with sustainable practices presented a causal recipe, leading to satisfaction.

<Insert Table 4 About Here>

Similar to satisfaction, fsQCA identified three causal recipes that described the conditions that resulted in guests' loyalty (coverage: 0.969, consistency: 0.913) and in each case the social dimension was necessary. Results of analysis of necessary condition are provided in Table 5. Social, environmental and economic dimensions were necessary conditions to ensure guests' satisfaction and loyalty as the magnitude of consistency values was above or close to 0.90. Consistency above 0.85 is considered as an acceptable cut-off of necessary condition (Olya & Han, 2020). Familiarity was not necessary to improve satisfaction and loyalty of hotel guests. Satisfaction was a necessary factor to achieve guests' loyalty.

<Insert Table 5 About Here>

## **5. Discussion and Implications**

This study aimed at examining the effects of the three dimensions of sustainability practices of hotels (economic, social and environmental) on hotel guest satisfaction and loyalty by considering the role of familiarity with supply chain's sustainability practices. A second aim of this study was to identify the conditions that are necessary for the achievement of guest satisfaction and loyalty. By being the first empirical study to examine the necessary conditions for guest satisfaction and loyalty, this study contributes to both theoretical and practical knowledge that may be of use to academics, industry practitioners and policymakers alike.

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Overall, study findings confirm that there are a significant and positive relationships between the social, environmental and economic dimensions of sustainability and guest satisfaction, thus concurring with previous studies (Berezan et al., 2013; Modica et al., 2018; Xu and Gursoy, 2015b; Yu et al., 2017). This finding is not surprising considering the increasing awareness among hotel guests of the importance of sustainability (Cronon et al., 2011; Moise et al., 2018; Seth et al., 2011). As such, hotels need to incorporate sustainability practices in their business and marketing activities if they want to ensure guest satisfaction and firm competitiveness. Indeed, it was previously highlighted that customer satisfaction may contribute to company performance (Lo et al., 2015) and help a firm gain competitive advantage (Sanchez-Franco et al., 2018). With regard to the lesser examined variable of familiarity with sustainability practices, this study found that familiarity has a significant and positive effect on guest satisfaction. In other words, if guests are familiar with the hotels' sustainability practices, they will be more satisfied with the hotel. Therefore, study findings provide support to previous investigations asserting that familiarity may enhance customer satisfaction, as it reinforces product evaluation and purchase intention (Perera and Chaminda, 2013; Turkel et al., 2016). Within this context, it may be argued that hotels should adequately communicate their sustainability practices to their current and/or prospective guests.

Additionally, we identified positive relationships between the social and environmental dimensions of sustainability and guest loyalty but not between the economic dimension and guest loyalty. This finding suggest that guests are more likely to return to a hotel if the hotel is socially and environmentally responsible, however, the hotel's and its suppliers economic actions have no impact on their loyalty towards the hotel. This finding contradicts previous research on the influence of the sustainability dimensions on guest loyalty. For example, Modica et al. (2018) found the economic dimension of sustainability to directly influence hotel

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guest loyalty. Similarly, Xu and Gursoy (2015b) established a relationship between the economic and environmental dimensions and guest loyalty but not with the social dimension of sustainability. Evidently, hotels need to communicate their social and environmental practices to guests in order to enhance loyalty in Kazakhstan, as previously suggested (Chen, 2015; Lee et al., 2010). Indeed, such communication tactics may help improve the reputation of the company among its customers (Jang et al., 2015). In addition, as customer attitudes and behaviours towards the firm are informed by its approach to sustainability and by the cultural orientation of customers (Choi et al., 2016), it may be argued that the lack of a relationship between the economic dimension of sustainability and guest loyalty results from the cultural context within which the study was undertaken. Indeed, cultural differences were acknowledged as an antecedent to customer attitudes and behaviours towards sustainability (Miska et al., 2018).

Interestingly, in relation to familiarity, we found no effect of guest's familiarity with sustainability practices on their loyalty contrary to past studies that reported a significant relationship between these two variables (e.g., Plewa et al., 2015). However, results from fsQCA indicated that a combination of familiarity and social dimension increases guest loyalty. This is in line with Woodside (2014) and Olya and Altinay (2016) who argued that the role of each antecedent depends on the attribute (presence or absence) of other antecedents in a given recipe leading to the expected outcome.

This study contributes to the sustainability literature in the field of hospitality by exploring sufficient recipes (combination of three sustainability dimension along with familiarity) leading to guest satisfaction and loyalty. The fsQCA results suggest that for significant groups within the population investigated, the social dimension is of significance; thus, supporting arguments of previous studies, which suggest that the sustainable practices of

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a firm are closely linked to the social background of Asian cultures (Xu and Yang, 2010). Many studies have suggested that collectivist and long-term oriented societies, such the Kazakh society, place higher emphasis on sustainability practices that can benefit the society (Lee and Herold, 2016; McCarty and Shrum, 2001). Thus, collectivist and long-term oriented nature of Kazakh culture lead Kazakh consumers to place greater emphasis on social and environmental benefits of sustainability practices for their communities than the economic and financial indulgence, which result in support for businesses that initiate and implement social and environmental sustainable business practices. Considering the fact that hospitality companies have historically emphasized the environmental practices of sustainability (Chen and Peng, 2016) with the social dimension of sustainability receiving less attention in company sustainability reports (Bohdanowicz and Zientara, 2009), it is crucial that hospitality businesses located Kazakhstan not only focus on environmental sustainability practices but also place great emphasis on sustainability practices related to social dimension.

Study findings indicate that all three dimensions of sustainability are necessary conditions for hotel guest satisfaction. Therefore, results of this study provide significant insight to hotel managers in Central Asian contexts for highlighting the development and implementation of sustainability practices that encompass all three dimensions. It is also important that managers understand the interactions between social, economic and environmental dimensions of sustainability practices, which can significantly increase benefits of sustainability practices for the success of a company (Xu and Gursoy 2015). For example, hotels may provide training and advancement opportunities that can improve social welfare while motivating employees to provide higher quality services and, in turn, improve customer satisfaction and revenue. It is also critical that the marketing departments of hotels need to

disseminate information on practices related to these three dimensions of sustainability and promote their implementation accordingly through print and online channels.

Moreover, this study found that all three dimensions of sustainability are necessary factors to achieve loyalty among hotel guests. Thus, hotel managers need to pay close attention to raising awareness of their sustainability practices among guests in order to enhance guest loyalty. Indeed, previous studies highlight the importance of sustainability on guest loyalty as such practices may improve company attractiveness (Chi and Gursoy, 2009), perceived product quality (Shi et al., 2014) and company reputation (Pena et al., 2013). Hotel managers should also be aware of the familiarity level of their guests in terms of sustainability practices, as its combination with social dimension may increase their loyalty.

## 6. Conclusion

This empirical study examined the effects of the Kazakh hotels' sustainable practices, namely the economic, social and environmental dimensions, on guest satisfaction and loyalty. This study also investigated the role of familiarity with sustainability practices in predicting guest satisfaction and loyalty, which has been largely overlooked in extant literature. Furthermore, this study is the first to examine the conditions that are necessary for the achievement of guest satisfaction and loyalty. Thus, this study contributes to existing theoretical and practical knowledge on the implementation of sustainability within the hotel industry.

Overall, this study concludes that familiarity and all three dimensions of sustainability are *sufficient* to increase hotel guests' satisfaction. While social and environmental dimensions emerged as sufficient antecedents of loyalty, familiarity and the economic dimension alone are found to be *insufficient* to achieve guest loyalty. The fsQCA results indicated how a combination of these three dimensions of sustainability with guest familiarity of sustainable

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practices may influence satisfaction and loyalty. Specifically, a combination of the social dimension with each of the three antecedents (familiarity and environmental and economic dimensions of sustainability) form *recipes* to improve satisfaction and loyalty. These results show that although familiarity alone is insufficient, its combination with the social dimension may increase guest satisfaction and loyalty. Similarly, the economic dimension is insufficient to increase loyalty but along with the social dimension, it may encourage guests to revisit the hotel. In terms of the necessity of antecedents of satisfaction and loyalty, the social, environmental and economic dimensions are found to be *necessary* to achieve guest satisfaction and loyalty. Study findings indicate that familiarity is *unnecessary* to obtain the expected outcomes; however, satisfaction is a requirement in order to obtain loyalty entailing that without satisfaction, it is less likely for hotels to have loyal guests.

Findings of this study provide important practical insights with regard to sustainability in the hotel industry, particularly in Central Asian cultural contexts, which have insofar received very little scholarly attention. For instance, study findings indicate that hotel managers need to implement and communicate all three dimensions of sustainability practices to hotel guests as these dimensions contribute to the enhancement of guest satisfaction and loyalty. Guests with high levels of familiarity with sustainability practices of hotel are most likely to be satisfied if the hotel follows sustainability principles. Managers can, therefore, enhance guest loyalty by improving their familiarity along with knowledge on the social dimensions of sustainability practices, which appear to be greatly valued within Kazakhstan contexts (Xu and Yang, 2010).

In conclusion, this study addresses important gaps in the literature on hotel sustainability in terms of geographical scope and scale, as it considers Kazakhstan guests' perceptions of the sustainability of the hotel sector. To this end, this study yields significant

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theoretical and practical insights. Notwithstanding, the study is not free of limitations. Study findings are based on cross-sectional data collected from one Central Asian country, which may inhibit the generalisation of findings to the hotel industries in other Asian countries. This study examined the perceptions of hotel guests only. Therefore, future research may want to conduct experimental research to involve the views of other stakeholders across the entire hotel supply chain in other Asian cultural contexts as well. Specifically, future research may be performed to consider the views of hotel managers in bridging the gap between suppliers and guests regarding hotel sustainability practices. Finally, as the literature suggests, young, educated and female guests are most likely to be informed and engaged in sustainability practices (Muralidharan and Sheehan, 2018), future research may examine the influence of guest demographics on the perceptions of sustainability in hotel.

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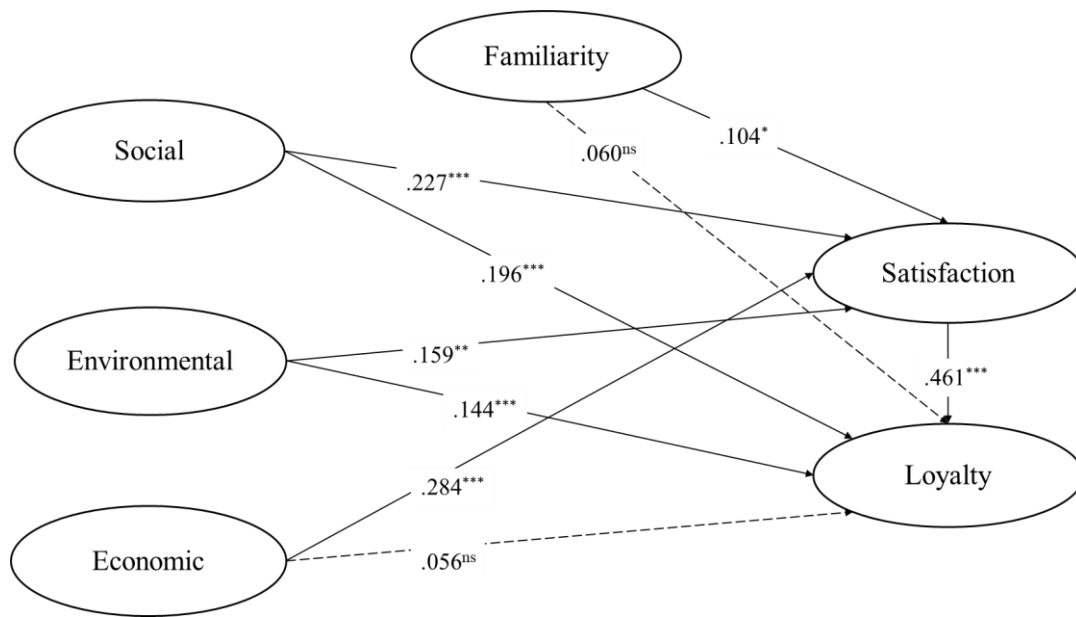
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Note: non-significant effect indicated as dotted line. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Figure 1. Results of regression analysis**

**Table 1. Descriptive statistics, normality, reliability and confirmatory factor analysis results**

Scale item	$\lambda$	Mean	SD	Kurtosis	Skewness
<i>Social Dimension (<math>\alpha</math>: 0.920 ; CR: 0.919; AVE: 0.512)</i>					
Create a safe and healthy work environment	0.780**	4.413	0.713	4.199	-1.562
Provide measures that ensure safe and healthy working conditions for all employees	0.690**	4.413	0.738	2.442	-1.383
Comply with labour legislation and employee contracts	0.710**	4.385	0.800	3.990	-1.729
Support all employees who want to pursue further education	0.519**	4.271	0.720	0.639	-0.830
Listen to employees' suggestions	0.549**	4.179	0.772	2.911	-1.224
Provide all employees with proper and fair wages that reward them for their work	0.650**	4.271	0.745	1.554	-1.023
Improve product quality and enhance added value	0.735**	4.358	0.691	2.282	-1.116
Be customer-oriented	0.819**	4.408	0.744	2.972	-1.499
Provide all customers with high quality services and products	0.819**	4.353	0.747	3.196	-1.412
Provide all customers with accurate and adequate information in making purchasing decisions.	0.778**	4.390	0.656	-0.091	-0.715
Treat all customers fairly	0.748**	4.252	0.770	1.078	-0.955
<i>Environmental Dimension (<math>\alpha</math>: 0.763; CR: 0.756; AVE: 0.509)</i>					
Implement an energy saving program	0.654**	3.766	0.951	-0.613	-0.257
Use solar power instead of fuel	0.707**	3.945	0.839	-0.136	-0.459
Use water-saving flush in bathrooms	0.860**	3.710	0.811	-0.479	-0.151
Communicate the environmental policy to customers	0.607**	3.954	0.942	0.955	-0.912
<i>Economic Dimension (<math>\alpha</math>: 0.793; CR: 0.796; AVE: 0.510)</i>					
High return on their assets	0.701**	3.881	0.751	0.632	-0.520
High net sales growth	0.699**	3.982	0.717	1.437	-0.726
High overall performance and success level	0.802**	4.078	0.795	1.768	-1.024
High competitive position	0.700**	4.124	0.735	1.428	-0.829
High occupation rate growth	0.661**	3.784	0.931	0.404	-0.657
<i>Familiarity (<math>\alpha</math>:0.789 ; CR:0.795 ; AVE:0.569)</i>					

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I am familiar with hotels and their suppliers' sustainability practices.	0.636**	3.216	0.988	-0.765	-0.330
Compared to public, I am familiar with hotels and their suppliers' sustainability practices.	0.903**	3.248	0.983	-0.844	-0.194
Compared to my friends and acquaintances, I am familiar with hotels and their suppliers' sustainability practices.	0.699**	3.344	0.965	-0.512	-0.368
<i>Loyalty (<math>\alpha</math>: 0.815; CR: 0.819; AVE:0.602 )</i>					
I will recommend this type of hotel to my friends, relatives or colleagues	0.773**	3.927	0.769	1.271	-0.727
I will spread positive recommendations of this type of hotel to others	0.838**	3.922	0.722	0.323	-0.470
I will stay at this type of hotel whenever possible	0.713**	3.922	0.703	0.394	-0.449
<i>Satisfaction (<math>\alpha</math>:0.879 ; CR: 0.879; AVE: 0.596)</i>					
I will be very happy if I can stay at this type of hotel	0.863**	3.950	0.774	1.880	-0.870
I will be very satisfied if a hotel can provide such level of service	0.860**	4.000	0.684	1.204	-0.520
My choice to stay in the hotel will be a wise one	0.713**	4.119	0.617	-0.419	-0.079
I think it would be the right thing to stay at this type hotel	0.731**	3.986	0.655	-0.354	-0.085
I will be very happy if I can stay at this type of hotel	0.672**	4.014	0.681	0.247	-0.369

*Note:*  $\lambda$ : Confirmatory factor loading value;  $\alpha$ : Cronbach's Alpha CR: Composite Reliability; AVE: Average Variance Extracted; SD: standard deviation. Fit statistics: standardized root mean squared residual (SRMR): 0.061 (cut-off <0.08); Normed Fit Index (NFI): 0.934 (cut-off > 0.09).

**Table 2. Demographics of respondents**

<b>Gender</b>	<b>N</b>	<b>%</b>	<b>Age</b>	<b>N</b>	<b>%</b>
Female	145	66.51	17-27 years old	78	35.78
Male	73	33.49	28-37 years old	82	37.61
Total	218	100.00	38-47 years old	30	13.76
<b>Marital Status</b>			48-57 years old	20	9.17
Single	93	42.70	Older than 57 years old	8	3.67
Married	103	47.20	Total	218	100.00
Divorced	22	10.10	<b>Average Monthly Income (\$)</b>		
Total	218	100.00	Below 1000	34	15.60
<b>Educational Level</b>			1001- 2000	136	62.39
Diploma and below	24	11.00	2001 -4000	27	12.39
Some college degree	10	4.60	40001- 5000	16	7.34
Bachelor	122	56.00	Above 5000	5	2.29
Master	58	26.60	Total	218	100.00
PhD	4	1.80			
Total	218	100.00			

**Table 3. Results of discriminate validity**

Fornell-Larcker Criterion						
<i>Construct</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1.Economic Dimension	<b>0.666</b>					
2.Environmental Dimension	0.457	<b>0.668</b>				
3.Social Dimension	0.469	0.492	<b>0.715</b>			
4.Familiarity	0.166	0.108	-0.016	<b>0.755</b>		
5.Loyalty	0.463	0.509	0.501	0.129	<b>0.776</b>	
6.Satisfaction	0.492	0.436	0.428	0.153	0.704	<b>0.772</b>

Heterotrait-Monotrait Ratio (HTMT)						
<i>Construct</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1.Economic Dimension						
2.Environmental Dimension	0.453					
3.Social Dimension	0.464	0.466				
4.Familiarity	0.189	0.185	0.424			
5.Loyalty	0.463	0.496	0.078	0.142		
6.Satisfaction	0.500	0.423	0.494	0.153	0.707	

*Note:* Diagonal bolded values are square root of AVE.

**Table 4. Results of configurational modelling**

<b>Causal model for predicting satisfaction</b>	<b>Raw coverage</b>	<b>Unique coverage</b>	<b>Consistency</b>
M1: Environmental * Social	0.884	0.023	0.948
M2: Social * Economic	0.911	0.039	0.949
M3: Social * Familiarity	0.682	0.009	0.980
solution coverage: 0.957			
solution consistency: 0.933			
<b>Causal model for predicting loyalty</b>			
M1: Environmental * Social	0.902	0.027	0.935
M2: Social * Economic	0.922	0.032	0.927
M3: Social * Familiarity	0.629	0.008	0.961
solution coverage: 0.969			
solution consistency: 0.913			

*Note:* M stands for model.

**Table 5. Results of analysis of necessary condition**

Antecedent necessary condition	<i>Outcome: Satisfaction</i>		<i>Outcome: Loyalty</i>	
	Consistency	Coverage	Consistency	Coverage
<b>Social</b>	<b>0.974</b>	0.902	<b>0.983</b>	0.880
~Social	0.175	0.973	0.178	0.955
<b>Environmental</b>	<b>0.892</b>	0.939	<b>0.909</b>	0.924
~Environmental	0.306	0.986	0.312	0.972
<b>Economic</b>	<b>0.923</b>	0.937	<b>0.931</b>	0.913
~Economic	0.275	0.937	0.276	0.967
Familiarity	0.690	0.976	0.698	0.954
~Familiarity	0.532	0.962	0.544	0.951
<b>Satisfaction</b>			<b>0.965</b>	0.932
~Satisfaction			0.261	0.969

*Note:* necessary antecedent condition is highlighted in bold (consistency >0.9). ~ is outcome negation.