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# Consumer perceptions towards sustainable supply chain practices in the hospitality industry

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**ABSTRACT**
This study investigates the impacts of economic, social and environmental sustainability practices of companies in the hospitality supply chain on consumers' satisfaction, loyalty and willingness to pay higher prices. Utilizing data collected from 288 tourists visiting south Sardinia, the study indicates that while economic sustainability practices have positive impacts on consumers' satisfaction, loyalty and willingness to pay a premium, sustainability practices related to environmental and social dimensions have a direct positive impact on satisfaction and an indirect positive impact on consumer loyalty and willingness to pay a premium. Additionally, findings reveal that satisfaction is likely to mediate the impact of environmental and social sustainability practices on the loyalty of consumers. The theoretical and managerial implications of the study are provided.

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Sustainability; supply chain practices; hospitality; consumer perceptions; Sardinia

## Introduction

In recent years, the concept of sustainability has gained currency among practitioners in the hospitality industry. The reason for the increased popularity of sustainability in hospitality is two-fold. First, sustainability in hospitality has become a significant determinant influencing consumer perceptions and decision-making aspects such as the loyalty of consumers and the willingness of consumers to pay exceptional prices (Teng, Horng, Hu, Chien, & Shen, 2012). Second, the significance of sustainability within the tourism and hospitality industries has been increasingly emphasized by governments and community organizations that place pressures on companies to align their practices to sustainability principles (Xu & Gursoy, 2015a). The hospitality industry, in particular, has been acknowledged as a key supplier of the tourism product with a significant contribution to destinations' economies which, nonetheless, imposes pressures on the environment and the host community (de Grosbois, 2012). The increased popularity of sustainability issues in hospitality is reflected by a proliferation of studies focusing on the antecedents, impacts, actions and evaluation mechanisms of sustainability practices (e.g. Berezan, Raab, Yoo, & Love, 2013; Chen, 2015; Kang, Stein, Heo, & Lee, 2012). These studies are insightful and informative about the influence of sustainability on consumer perceptions, attitudes and behaviour.

Nonetheless, a foray into extant literature identifies a one-dimensional focus of past studies. For instance, most studies have centred investigation on of sustainability, focusing either on the

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environmental aspect such as green practices (e.g. Namkung & Jang, 2017) or on the social aspect including corporate social responsibility (e.g. Martinez & del Bosque, 2013). Additionally, most previous studies concentrated on a single sector of the hospitality industry such as hotels or restaurants, overlooking the importance of the involvement of all the stakeholders of the hospitality supply chain in sustainability (Lo, King, & Mackenzie, 2017; Shin, Im, Jung, & Severt, 2017). As Xu and Gursoy (2015a, p. 229) stated 'true sustainability can be achieved only if all members of a supply chain participate in sustainability practices'. In a conceptual framework developed by Xu and Gursoy (2015a), the supply chain is acknowledged as possessing specific characteristics that emanate from both manufacturing and service supply chains. According to the authors, the effective management of the supply chain requires the adherence to environmental, social and economic aspects as indicated by the triple bottom line approach (Hall, Matos, & Silvestre, 2012), which became known as representing the three objectives of sustainable development. Insofar, there has been limited academic attention devoted to the influence of all three sustainability dimensions in relation to the management of hospitality supply chain practices.

While research has been performed on the impact of sustainable hospitality supply chain practices on consumer behavioural aspects, past studies evaluating customer perceptions and attitudes towards sustainable practices in hospitality have focused on specific sustainability dimensions (i.e. environmental) or on consumers from specific geographical region (Chin, Chin, & Wong, 2018; Xu & Gursoy, 2015b). For example, Xu and Gursoy (2015b) examined impacts of environmental, social and economic dimensions of sustainable hospitality supply chain management practices on American travellers' attitudes and behaviours including satisfaction, loyalty and willingness to pay a premium for sustainable hospitality goods and services. Their results indicated that both environmental and economic dimensions' practices have positive impacts on American consumers' satisfaction, loyalty and willingness to pay a premium for sustainable hospitality goods and services, the social dimension practices were found to have positive impact on satisfaction and a negative impacts on willingness to pay a premium. They also reported satisfaction to fully mediate the relationship between social dimension practices and loyalty. However, Xu and Gursoy (2015b) indicated that their findings may not be applicable to consumers outside the United States because American consumers tend to exhibit significantly different attitudes and behaviours towards green products compared consumers located in other geographical regions of the world. For example, studies suggest that European consumers are 50% more likely than American consumers to purchase environmentally friendly sustainable products (Thompson, 2007). Thus, it is critical to examine perceptions and attitudes of consumers located in different geographical regions towards sustainable practices in hospitality. Therefore, this study aims to advance our knowledge of the impact of sustainability practices on consumers' attitudes and behaviours by focusing on European travellers' hotel selection process. Specifically, this study examines the influence of sustainability practices of companies in the hospitality supply chain related to environmental, social and economic dimensions of sustainability on the behavioural aspects of customer satisfaction, loyalty and willingness to pay a premium price, which emerge as most predominant in the extant literature.

The rest of the paper is organized as follows. First, a review of the literature is provided in order to establish the theoretical background of the study and contribute to the development of hypotheses. The importance of sustainability in the hospitality supply chain is explained before an overview of past studies evaluating the impacts of sustainable supply chain management practices on consumer perceptions is provided. Then, the methodology adopted in this study is described. Following, the results of the data analysis are presented before the implications, limitations and future research directions are drawn together as conclusions.

## Literature review

### *Sustainability in hospitality supply chain management*

Extant literature on supply chain management identifies two predominant forms of supply chains: manufacturing and service supply chains. The first refers to a process whereby units are transformed

from raw materials into products and sold to end-consumers whereas the latter is defined as the inbound and outbound service experiences offered to consumers by firms (Miles & Snow, 2007). The hospitality supply chain possesses elements of both manufacturing and service supply chains. Specifically, it has been defined by Xu and Gursoy (2015a, p. 232)

> as a network of hospitality organisations engaged in different activities including the supply of various components of hospitality products and/or services such as raw food materials, equipment and furniture from various suppliers; distribution and marketing of the final hospitality products and/or services to the consumers for a specific hospitality business such as a hotel or a restaurant.

Therefore, the management of the supply chain in hospitality extends beyond procurement and logistics and differs from a traditional supply chain along six features. First, hospitality products are perishable with the variable cost of the hospitality product often being lower than fixed costs (Guo, Ling, Yang, Li, & Liang, 2013); hence, revenue management is important for hospitality suppliers. Second, the generation of consumer demand is crucial in hospitality, particularly in relation to positive word-of-mouth (Cantallops & Salvi, 2014). Third, there are various suppliers providing the hospitality product with the hospitality supply chain being characterized as a close-loop one (Xu & Gursoy, 2015a). Fourth, demand for hospitality products is uncertain due to intense competition among hospitality companies and the industry's susceptibility to external factors such as the weather (Zhang, Song, & Huang, 2009). Fifth, the simultaneous production and consumption of the hospitality product problematizes logistics. Last, collaboration among hospitality business is crucial as multiple hospitality products provided by various companies are offered to consumers as a package.

In recent years, arguments concerning the importance of aligning the hospitality supply chain to sustainability principles have intensified. Driven by the realization that all members of the supply chain need to participate in sustainability efforts, researchers in hospitality advocate the implementation of sustainability practices from the upstream of the supply chain, highlighting the importance of supplier selection and cooperation (e.g. Xu & Gursoy, 2015a). Studies on traditional supply chains indicate the consideration of environmental, social and economic aspects as imperative in effective supply chain management (Hall et al., 2012). Likewise, Xu and Gursoy (2015a) identified the triple bottom line approach to sustainability as critical in hospitality for the successful implementation of sustainable development objectives, namely economic, social and environmental sustainability. In other words, hospitality suppliers need to ensure that the negative impacts on the environment resulting from their actions are minimized, that their operations enhance the social welfare of related stakeholder such as employees, consumers and other suppliers and that profit is generated long-term. A range of benefits has been identified as emanating from the sustainable practices of hospitality supply chain members. For instance, company image may be enhanced (Han, Hsu, Lee, & Sheu, 2011) whilst the profitability of all supply chain members may be improved (Molina-Azorin, Claver-Cortes, Lopez-Gamero, & Tari, 2009). In evaluating the positive impacts of the sustainable supply chain, an important array of work has emerged discussing the influence of sustainability practices on consumer behavioural aspects. Specifically, satisfaction, loyalty and willingness to pay an exceptional price emerge as the most predominant variables examined in relation to consumer perceptions and attitudes towards sustainability practices. Previous studies confirm the positive influence of sustainable hospitality supply chain practices on consumer perceptions and behaviours, as consumers are becoming increasingly conscious over the environmental-friendly and responsible aspects of products and services (Cronin, Smith, Gleim, Martinez, & Ramirez, 2011).

### *Supply management and consumer perceptions*

The majority of studies looking into the impact of sustainable supply chain practices on consumer perceptions focused on the relationship between the three dimensions of sustainability and consumer satisfaction. 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 & Keller, 2006, p. 144), satisfaction has been widely examined in hospitality studies (Cicerali, Kaya Cicerali, & Saldamlı, 2017). Generally speaking, consumer satisfaction is an indication of company success in providing products and services efficiently and in creating value for consumers. Management literature indicates that high consumer satisfaction translates into higher profits, larger market share, repeat purchase, positive word-of-mouth and enhanced company reputation (e.g. McDougall & Levesque, 2000). In relation to the hospitality product, which exhibits specific characteristics in comparison to traditional products, consumer satisfaction has been acknowledged as being highly important for company profitability. Recently, as the importance of sustainability for hospitality consumers increased, academic attention has shifted towards the relationship between sustainability practices and consumer satisfaction as evidenced by a burgeoning number of studies examining the contributory role of sustainability actions on consumer satisfaction.

Specifically, several studies have examined the impacts of the three dimensions of sustainability on consumer satisfaction. However, most of those studies have focused on the examination of the relationship between a single dimension of sustainability and satisfaction. Representing an energy-intensive and waste generating industry, the hospitality sector has been under pressure from environmental groups and non-profit organizations to minimize its negative environmental impacts. Likewise, the increased consciousness of consumers led many hospitality businesses to adopt environmental-friendly practices in an attempt to reduce their environmental footprint. Thus, in relation to the environmental dimension, it has been found that consumer satisfaction is positively impacted by environmental-friendly actions of hospitality companies (Berezan et al., 2013; Lu & Stepchenkova, 2012; Slevitch, Mathe, Karpova, & Scott-Halsell, 2013). Specifically, Gao and Mattila (2014) found that consumer satisfaction increased when companies were engaged with environmental-friendly practices. Similarly, Yu, Li, and Jai (2017) argued that hotels' green practices contribute to consumer satisfaction whereas Graci and Kuehnel (2011) established a positive relationship between green practices of hotels and reduced operating costs. Indeed, consumer satisfaction was found to mediate between environmental practices and companies' financial performance (Kassinis & Soteriou, 2003). Interestingly, in evaluating the impact of economic sustainability on consumer satisfaction, studies found that good financial performance acts as an antecedent of high satisfaction (Jung & Yoon, 2013; Lo, Wu, & Tsai, 2015). The financial performance of companies is an indication of their capability to offer high quality services, which is a determinant of consumer satisfaction (Sanchez-Fernandez & Iniesta-Bonillo, 2009). Lastly, the social dimension of sustainability has been examined in relation to consumer satisfaction with studies concurring the positive relationship between the two variables. For example, socially responsible companies have been found to offer better working conditions (Brown, 2007), thereby increasing employee satisfaction (Chi & Gursoy, 2009) and consequently consumer satisfaction as employees are likely to perform more efficiently at work (de Leaniz & Rodriguez, 2015). The impact of employee satisfaction on performance is particularly significant in the hospitality industry in which there is a close interaction between employees and consumers (Kassinis & Soteriou, 2003). Likewise, companies' socially responsible actions may contribute to company reputation and brand image (Lee & Heo, 2009) through the selection of environmental-friendly suppliers (Guide, Jayaraman, & & Linton, 2003) and the cooperation with local suppliers (Holmes & Yan, 2012). Given these arguments, we develop the following hypothesis:

**$H_1$:** There is a positive relationship between (a) environmental, (b) social and (c) economic dimensions of the supply chain and consumer satisfaction.

Studies examining the impact of the three dimensions of sustainability on consumer loyalty can also be found. Consumer loyalty has been defined as the strength of the relationship between one's relative attitude and repeats purchase (Dick and Basu, 1994; Rather, 2018). Representing the attachment consumers place on products, brands and/or companies, consumer loyalty is an important construct within hospitality as it can indicate future behavioural intentions, trust and

consumer identification with the company (Martinez & del Bosque, 2013; Sipe & Testa, 2018). Unsurprisingly, many hospitality companies offer reward schemes and loyalty programmes in an attempt to enhance consumer loyalty and increase consumer satisfaction (Liu and Mattila, 2016). Within hospitality, the environmental dimension of sustainability has been found to contribute to the enhancement of consumer loyalty (Chen, 2015; Lee, Hsu(Jane), Han, & Kim, 2010). As an increasing number of consumers demand green actions from hospitality companies, environmental-friendly activities can improve company reputation (Jang, Kim, & Lee, 2015) and ultimately influence the loyalty of the consumers positively. Likewise, the social actions of hospitality companies may increase consumer loyalty. For instance, employee welfare schemes can enhance the attractiveness of a company and contribute to brand loyalty (Chi & Gursoy, 2009). Similarly, economic sustainability plays an important role in enhancing consumer loyalty. Shi, Prentice, and He (2014) argued that good financial performance improves the quality of products and hence contributes to consumer loyalty. Equally, good financial performance of hospitality companies strengthens company reputation and may help generate consumer loyalty (Pena, Jamilena, & Molina, 2013) whereas as Jung and Yoon (2013) argued the financial performance of hospitality companies may enhance consumer loyalty indirectly by contributing to consumer and employee satisfaction. Therefore, we propose that:

**$H_2$:** There is a positive relationship between (a) environmental, (b) social and (c) economic dimensions of the sustainable supply chain and consumer loyalty.

Lastly, several studies examining the impact of sustainability practices on consumers' willingness to pay higher prices have been conducted. Generally, the ecological concerns of consumers in hospitality have been argued to increase willingness to pay for environmental-friendly company initiatives (Chen & Tung, 2014; Kang et al., 2012; Lee et al., 2010), with Han et al. (2011) suggesting that consumers engage with companies that have environmental-friendly policies. Kang et al. (2012) concluded that consumers of luxury hotels and mid-priced hotels exhibit greater willingness to pay higher prices for environmental-friendly practices than consumers of economy hotels whereas, in the context of restaurants, Namkung and Jang (2017) confirmed consumer willingness to pay premium prices for green practices. In respect to social sustainability, it was found that consumers are prepared to pay premium prices for well-trained employees and for locally produced goods (Bechwati, 2011; Onozaka & Mcfadden, 2011). Furthermore, the socially responsible actions of companies can enhance employee productivity and satisfaction (Lee, Song, Lee, Lee, & Bernhard, 2013) as well as support local communities through the cooperation with local suppliers, thereby increase consumer willingness to pay a premium. Economic sustainability should also not be ignored within the scope of consumer eagerness to pay an exceptional price. Previous research indicates that consumers are more eager to pay higher prices for the services of companies with successful performance (Campbell, DiPietro, & Remar, 2014; Fornell, Rust, & Dekimpe, 2010). Higher willingness to pay premium prices for the products of companies with good financial performance results from higher satisfaction and higher perceptions of product quality, which are associated with the economic profitability of businesses. Thus, informed by the literature we propose the hypothesis:

**$H_3$:** There is a positive relationship between (a) environmental, (b) social and (c) economic dimensions of the supply chain and consumer willingness to pay higher prices.

Interestingly, the variables of consumer satisfaction, loyalty and willingness to pay have been found to be interrelated. For instance, Nunkoo, Gursoy, and Ramkissoon (2013) established a positive relationship between consumer satisfaction and loyalty whereas Gursoy, Chen, G, and Chi (2014) argued that consumer satisfaction is an antecedent of consumer loyalty. Kim, Cha, Singh, and Knutson (2013) confirmed the positive link between the two constructs while Loureiro and Kastenholz (2011) identify perceived quality's mediating effect between consumer satisfaction and loyalty. Likewise, loyal consumers were found to be more willing to pay higher prices

(Gursoy et al., 2014; Jensen & Drozdenko, 2008). Taking into account these findings, this study proposes that:

**$H_4$:** There is a positive relationship between consumer satisfaction and consumer loyalty.

**$H_5$:** There is a positive relationship between consumer loyalty and consumers' willingness to pay higher prices.

## Methodology

### *Questionnaire*

The hypotheses presented in the previous section were tested utilizing data collected through a self-administered questionnaire, developed by Xu and Gursoy's (2015a). Five sections were included in the questionnaire. In the first three sections, several items measuring the consumers' perceptions of the sustainability practices of hospitality supply chain members, hereby referred to as Sustainable Hospitality Supply Chain Management (SHSCM). Consistent with Xu and Gursoy's (2015a) definition, the hospitality supply chain (HSC) in the survey was defined

> as a network of hospitality organisations engaged in different activities including the supply of various components of hospitality products and/or services such as raw food materials, equipment and furniture from various suppliers; distribution and marketing of the final hospitality products and/or services to the customers for a specific hospitality business such as a hotel or a restaurant

In particular, the first section focused on the environmental sustainability dimension. This section included 33 items that measured attention to product design, service process design, reuse and recycling, management of products during service delivery, waste and pollution management and expansion of products' life cycle among other factors. The second section contained 36 items measuring the social sustainability dimension related to employees, consumers, communities, suppliers and the government. The third section with 19 items analysed economic sustainability practices (e.g. cost control, income growth, and expansion of market share). The fourth section contained several items measuring consumers' behaviours and intentions such as satisfaction, loyalty and willingness to pay a premium price. Items in the first four sections of the questionnaire were measured on a 5-point Likert scale, ranging from 1 (completely disagree) to 5 (completely agree). Questions aimed to measure respondents' socio-demographic were included in the fifth section.

### *Sample and data collection*

The sample included tourists visiting south Sardinia between May 2017 and September 2017. The respondents were selected in accordance to quota random sampling based on their nationality. A total of 327 questionnaires were completed by tourists. After eliminating responses with missing data, 288 questionnaires were retained for data analysis. Table 1 shows the socio-demographic profile of respondents. Overall, 51.1% of the samples were female whereas the majority of respondents (80.7%) were under 54 years old. Approximately, 36.5% of the respondents were Italian, 18.8% were British, 19.4% were French and 19.8% were German. Almost 40% of the respondents were married while those being single represented 37.2% of the sample. Around 44% of the respondents worked in managerial, professional and similar positions whereas the median annual income was about 49,000 euros.

### *Data analysis*

To test the model and hypothesized relationships, structural equation modelling was conducted. In a first step, a confirmatory factor analysis (CFA) was conducted to test the construct validity, reliability and unidimensionality properties of the measurement model. Afterwards, interrelationships among the variables were estimated with the structural equation modelling. The *lavaan* package under

**Table 1.** Profile of Respondents.

| Variable | Range | % | Variable | Range | % |
|---|---|---|---|---|---|
| Gender | Male | 48.9 | Marital status | Single | 37.2 |
| | Female | 51.1 | | Married | 39.4 |
| Age | Under 13 | 0.0 | | Live together | 16.7 |
| | 14–17 | 1.1 | | Divorced | 4.3 |
| | 18–25 | 13.7 | | Widowed | 2.5 |
| | 26–34 | 26.1 | Occupation | Management. professional and related occupation | 43.8 |
| | 35–54 | 39.8 | | Service | 7.6 |
| | 55–64 | 12.3 | | Sales and Office occupations | 21.9 |
| | 65 or above | 7.0 | | Production. transportation and material moving | 3.1 |
| Education | Less than high school | 2.4 | | Retired | 7.6 |
| | High school | 25.0 | | Unemployed | 10.7 |
| | Certificate | 8.3 | | Other | 5.4 |
| | College/technical school | 11.1 | Income | Low (under 30,000 euros) | 21.7 |
| | Bachelor's degree | 17.0 | | Medium (from 30,001 to 60,000 Euros) | 44.6 |
| | Graduate work | 3.1 | | High (Over 60,001 Euros) | 33.7 |
| | Master's degree | 29.2 | | | |
| | Ph.D. | 1.0 | | | |
| | Other | 1.7 | | | |
| Nationality | Italian | 36.5 | | | |
| | British | 18.8 | | | |
| | French | 19.4 | | | |
| | German | 19.8 | | | |
| | Other | 5.6 | | | |

software R 3.4.0 was utilized for all estimations (Rosseel, 2012). The proposed model and the hypotheses are presented in Figure 1.

## Results

### *Measurement model*

A two-step approach was utilized to estimate the measurement and structural models. First, the measurement model was estimated using the Maximum Likelihood Estimation method. Model fit was evaluated using the Goodness of Fit Index (GFI), Root Mean Square Error of Approximations (RMSEA), and the $\chi^2$ and relative/normed chi-square ($\chi^2$/df) statistics (Wheaton, Muthen, Alwin, & Summers, 1977). Given that the fit indices of CFA are $\chi^2 = 1370.022$, ($df = 513$; $p < .0001$),

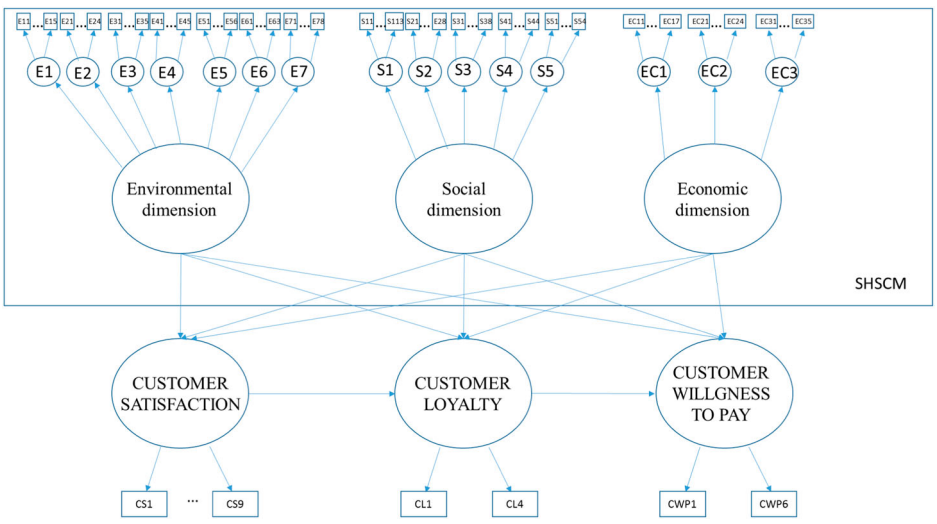


**Figure 1.** Consumer attitudes towards sustainable supply chain practices in the hospitality industry.

$\frac{\chi^2}{df} = 2.67$, GFI = 0.942 and RMSEA = 0.076, we concluded that the data fit the measurement model fairly well.

Table 2 reports the properties of the measurement model.[1] As reported in Table 2, all AVE values exceeded the ideal cutting off value of 0.50. Thus, the convergent validity of the constructs was established.

Next, squared correlations among the constructs were estimated (Table 3) and then compared to the AVE scores. Given that, all correlations between the constructs were less than 0.85 (Lee et al., 2013), the model discriminant validity was established. Furthermore, composite reliability scores of the constructs examined in this study varied from 0.752 to 0.978, exceeding the established cut-off value of 0.70 (Hair, Ringle, & Sarstedt, 2011) indicated that the items utilized to measure each construct had acceptable reliability.

## *Testing the proposed model and hypotheses*

After confirming that the measurement model was acceptable, the second step of the analysis examined the interrelationships among the constructs utilizing a structural modelling approach. The

**Table 2.** Results of the confirmatory factor analysis.

| Construct | Code | Standardized factor loadings | AVE | Construct reliability |
|---|---|---|---|---|
| SHSCM: Environmental dimension | | | 0.672 | 0.934 |
| | E1 | 0.814 | | |
| | E2 | 0.804 | | |
| | E3 | 0.841 | | |
| | E4 | | | |
| | E5 | 0.793 | | |
| | E6 | 0.850 | | |
| | E7 | 0.780 | | |
| | E8 | 0.847 | | |
| SHSCM: Social dimension | | | 0.650 | 0.902 |
| | S1 | 0.796 | | |
| | S2 | 0.823 | | |
| | S3 | 0.803 | | |
| | S4 | 0.844 | | |
| | S5 | 0.760 | | |
| SHSCM: Economic dimension | | | 0.512 | 0.752 |
| | EC1 | 0.753 | | |
| | EC2 | 0.534 | | |
| | EC3 | 0.810 | | |
| Customer Satisfaction | | | 0.690 | 0.952 |
| | CS1 | 0.814 | | |
| | CS2 | 0.845 | | |
| | CS3 | 0.865 | | |
| | CS4 | 0.807 | | |
| | CS5 | 0.856 | | |
| | CS6 | 0.814 | | |
| | CS7 | 0.875 | | |
| | CS8 | 0.853 | | |
| | CS9 | 0.739 | | |
| Customer Loyalty | | | 0.747 | 0.936 |
| | CL1 | 0.859 | | |
| | CL2 | 0.890 | | |
| | CL3 | 0.860 | | |
| | CL4 | 0.879 | | |
| Customer Willingness To Pay | | | 0.712 | 0.925 |
| | CWP1 | 0.832 | | |
| | CWP2 | 0.855 | | |
| | CWP3 | 0.749 | | |
| | CWP4 | 0.778 | | |
| | CWP5 | 0.919 | | |
| | CWP6 | 0.903 | | |

**Table 3.** The matrix of the correlations among the constructs.

| | Environmental dimension | Social dimension | Economical dimension | Satisfaction | Loyalty | Willingness to pay |
|---|---|---|---|---|---|---|
| Environmental dimension | 1.000 | | | | | |
| Social dimension | 0.734 | 1.000 | | | | |
| Economical dimension | 0.365 | 0.517 | 1.000 | | | |
| Satisfaction | 0.612 | 0.642 | 0.358 | 1.000 | | |
| Loyalty | 0.560 | 0.534 | 0.393 | 0.829 | 1.000 | |
| Willingness to pay | 0.487 | 0.412 | 0.390 | 0.605 | 0.707 | 1.000 |

indices of goodness-of-fit of the estimated structural model ($\chi^2 = 1435.394$, $df = 513$; $p < .0001$, $\chi^2/df = 2.798$, GFI = 0.902 and RMSEA = 0.079) indicated that the proposed structural model had a reasonably good fit to the data. Figure 2 reports the properties of the structural model and the standardized path coefficients for the estimated relationships. Table 4 presents a summary of the hypotheses testing results.

As presented in Table 4, the standardized paths coefficients between the environmental, social and economic sustainability dimensions of the hospitality supply chain and consumer satisfaction were significant and positive (Hp1a: $\beta_{1A}$= 0.292, *p*-value < .0001; Hp1b: $\beta_{1B}$ = 0.335, *p*-value < .0001; Hp1c: $\beta_{1c}$ = 0.133, *p*-value = .044). These findings suggest that sustainability practices of the hospitality supply chain towards environment, society and financial returns have a positive significant impact on consumer satisfaction. Hence, these results provided support for the hypotheses 1a, 1b, and 1c.

As presented in Table 4, findings indicated that only the path between the economic dimension and loyalty was significant and positive (Hp2c: $\beta_{2c}$ = 0.120, *p*-value = .019). The relationship between the environmental dimension and loyalty (Hp2a: $\beta_{2A}$ = 0.025, *p*-value = .670) and the relationship between social dimension and loyalty (Hp2b: $\beta_{2B}$ = –0.090, *p*-value = .173) were not found to be significant. Therefore, only hypotheses 2c was supported, while hypothesis 2a and 2b were rejected. Similar to the result of Hypothesis 2, the impact of economic dimension on willingness to pay a premium was positively significant (Hp3c: $\beta_{3c}$ = 0.167, *p*-value = .022), while the standardized path coefficients between environmental and social dimension and willingness to pay a premium were not significant (Hp3a: $\beta_{3A}$ = 0.089, *p*-value = .267; Hp3b: $\beta_{3B}$ = 0.015, *p*-value = .866). Therefore, hypotheses 3c was supported, while hypothesis 3a and 3b were rejected. Findings further indicated a direct positive relationship between satisfaction and loyalty (Hp4: $\beta_4$ = 0.862, *p*-value < .0001) and between loyalty and willingness to pay higher prices (Hp5: $\beta_5$= 0.479, *p*-value < .0001), which provided support for hypotheses 4 and 5.

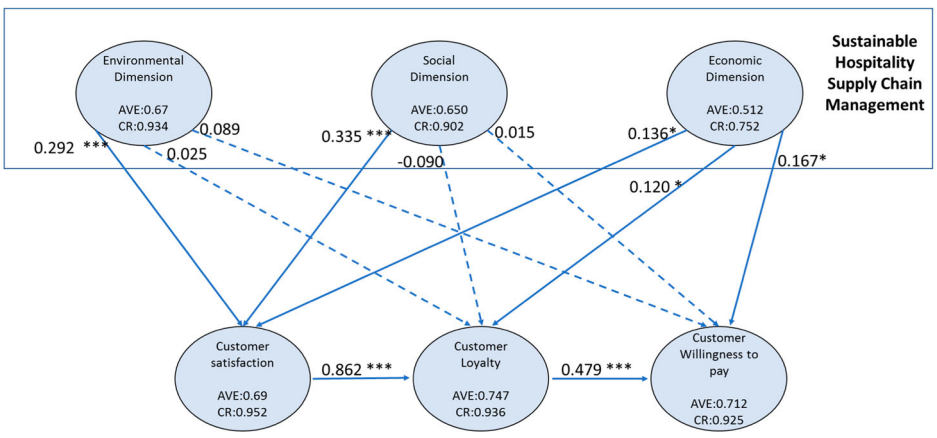


**Figure 2.** The results of the structural equation model.

**Table 4.** Hypotheses, standardized path coefficients, *p*-Value of the structural model.

| | | Standardized path coefficients | *p*-Value | |
|---|---|---|---|---|
| Hypothesis 1 | | | | |
| Hp1a | The environmental dimension of the SHSCM has a positive impact on consumer satisfaction | 0.292 | <.0001 | Supported |
| Hp1b | The social dimension of the SHSCM has a positive impact on consumer satisfaction | 0.335 | <.0001 | Supported |
| Hp1c | The economic dimension of the SHSCM has a positive impact on consumer satisfaction | 0.136 | .044 | Supported |
| Hypothesis 2 | | | | |
| Hp2a | The environmental dimension of the SHSCM has a positive impact on consumer loyalty. | 0.025 | .670 | Not supported |
| Hp2b | The social dimension of the SHSCM has a positive impact on consumer loyalty. | –0.090 | .173 | Not Supported |
| Hp2c | The economic dimension of the SHSCM has a positive impact on consumer loyalty. | 0.120 | .019 | Supported |
| Hypothesis 3 | | | | |
| Hp3a | The environmental dimension of the sustainable hospitality supply chain has a positive impact on consumer willingness to pay higher prices. | 0.089 | .267 | Not Supported |
| Hp3b | The social dimension of the sustainable hospitality supply chain has a positive impact on consumer willingness to pay higher prices. | 0.015 | .866 | Not supported |
| Hp3c | The economic dimension of the sustainable hospitality supply chain has a positive impact on consumer willingness to pay higher prices. | 0.167 | .022 | Supported |
| Hypothesis 4 | | | | |
| Hp4 | Consumer satisfaction has a significant positive impact on consumer loyalty. | 0.862 | <.0001 | Supported |
| Hypothesis 5 | | | | |
| Hp5 | Consumer loyalty has a significant impact on consumers' willingness to pay higher prices. | 0.479 | <.0001 | Supported |

Overall, the model suggests that only the economic dimension of the SHSCM has a direct positive impact on satisfaction, loyalty and willingness to pay higher prices while social and environmental dimensions have a direct positive impact only on consumer satisfaction. Moreover, the results confirm that consumer satisfaction has a positive impact on loyalty that in turn influences consumers' willingness to pay higher prices directly.

## Discussion

This study investigates the impacts of sustainability practices of companies in the hospitality supply chain on consumers' satisfaction, loyalty towards and willingness to pay higher prices. By investigating the impacts of all three dimensions of sustainability practices of the hospitality supply chain on consumers' attitudes and behaviours, this study makes important theoretical contributions to the field of hospitality. Since most pertinent studies focused on sustainability practices of individual companies on one of the three dimensions of sustainability, findings reported in this study offer important insights that advance existing knowledge on sustainable supply chain management in hospitality. Specifically, findings suggest that as the nature of competition shifts from the individual company level to the supply chain level, sustainability initiatives that are woven into the fabric of the entire hospitality supply chain can produce relatively more positive outcomes (Ashby, Leat, & Smith, 2012; Xu & Gursoy, 2015a).

Overall, this study suggests that all three dimensions of sustainability practices examined in this study directly and/or indirectly impact consumers' attitudes and behaviours, therefore concurring with past studies (Berezan et al., 2013; Lee & Heo, 2009; Xu & Gursoy, 2015b). While sustainability practices that focus on environmental conservation and protection have received the most attention in the literature, the current study indicates that social sustainability practices have the highest impact

**Table 5.** Dimensions and indicators of the model.

| Code | Dimension | Item |
|---|---|---|
| E | Environmental dimension | |
| E1 | Environmental dimension: Purchasing greener products | |
| E11 | | Use natural cleaning alternatives (e.g. lemon juice, vinegar, salt) |
| E12 | | Purchase environmentally friendly products |
| E13 | | Avoid purchasing overly packaged products |
| E14 | | Use natural products in hotel rooms |
| E15 | | Purchase organic certified food |
| E2 | Environmental dimension: Greener service process | |
| E21 | | Use compact energy saving fluorescent lighting |
| E22 | | Implement an energy saving programme |
| E23 | | Use solar power instead of fuel |
| E24 | | Use water-saving flush in bathrooms |
| E3 | Environmental dimension: Product management during Use | |
| E31 | | Provide information on public transportation, walking and cycling routes |
| E32 | | Develop an environmental policy |
| E34 | | Communicate the environmental policy to consumers |
| E35 | | Promote membership of environmental bodies/charities |
| E4 | Environmental dimension: Product life extension | |
| E41 | | Re-use foil, paper, envelopes, and menus |
| E42 | | Supply guests with TV remote controls with rechargeable batteries |
| E43 | | Furnish rooms with environmental-friendly materials |
| E5 | Environmental dimension: Recycling | |
| E51 | | Use cloth napkins instead of using one-time paper napkins |
| E52 | | Collect hand-washing water to water plants |
| E53 | | Recycle cooking oil |
| E54 | | Use recyclable packing materials or containers |
| E55 | | Avoid items that are not recyclable |
| E56 | | Collect and sell sorted waste and recyclable components |
| E6 | Environmental dimension: Pollution control | |
| E61 | | Implement waste-disposal practices |
| E62 | | Reduce the amount of waste per guest night |
| E63 | | Reduce operating noise volume as much as possible |
| E7 | Environmental dimension: Environment management systems | |
| E71 | | Use air purification equipment to make wasted air emissions from the central air conditioning have less pollutants |
| E72 | | Monitor water consumption |
| E73 | | Install water saving devices (e.g. flow regulators, waterless urinals) |
| E74 | | Use thermostat control and organic air fresheners |
| E75 | | Use environment evaluation systems |
| E76 | | Install grease interceptor to eliminate waste grease and food residues |
| E77 | | Use environmental information systems that allow information sharing and customized reporting |
| E78 | | Use a temperature control system |
| S | Social dimension | |
| S1 | Social dimension: Employees | |
| S11 | | Invest in employee development |
| S12 | | Engage in employment diversity |
| S13 | | Promote fair treatment of all employees |
| S14 | | Create a safe and healthy work environment |
| S15 | | Provide measures that ensure safe and healthy working conditions for all employees |

(*Continued*)

**Table 5.** Continued.

| Code | Dimension | Item |
|---|---|---|
| S16 | | Comply with labour legislation and employee contracts |
| S17 | | Support all employees who want to pursue further education |
| S18 | | Listen to employees' suggestions |
| S19 | | Provide all employees with proper and fair wages that reward them for their work |
| S111 | | Treat all employees equally and respectfully |
| S112 | | Provide training and development for employees |
| S113 | | Provide equal opportunity in the hiring, training, and promotion for women and minorities |
| S2 | Social dimension: Consumers | Respect the rights of consumers |
| S21 | | Provide safe environment for consumers |
| S22 | | Develop a fair pricing strategy |
| S23 | | Improve product quality and enhance added value |
| S24 | | Be consumer-oriented |
| S25 | | Provide all consumers with high-quality services and products |
| S26 | | Provide all consumers with accurate and adequate information in making purchasing decisions |
| S27 | | Treat all consumers fairly |
| S28 | | Respond to complaints of all consumers in a timely manner |
| S3 | Social dimension: Community | |
| S31 | | Organise activities for the local community |
| S32 | | Encourage hotel employees to take part in various kinds of social events |
| S33 | | Improve the quality of life of people in the community through financial support (e.g. donating money to the poor and disabled) |
| S34 | | Financially support education in the local community |
| S35 | | Stimulate the economic development in the community |
| S36 | | Donate to the community |
| S37 | | Provide financial support for community activities |
| S38 | | Encourage employee participation in community projects |
| S4 | Social dimension: Suppliers | |
| S41 | | Pay suppliers for their services and supplies on time |
| S42 | | Establish long-term partnerships with suppliers |
| S43 | | Bring social responsibility into the supply chain management |
| S44 | | Inform all suppliers about organizational changes that affect their operations |
| S5 | Social dimension: Government | |
| S51 | | Obey governmental regulations |
| S52 | | Create partnerships with government agencies |
| S53 | | Support governments' actions |
| S54 | | Operate legally and ethically |
| EC | Economic dimension | |
| EC1 (Economic dimension: Revenue growth) | | High return on their assets |
| EC11 | | High dividend payment |
| EC12 | | High cash flow |
| EC13 | | High net sales growth |
| EC14 | | High overall performance and success level |
| EC15 | | High competitive position |
| EC16 | | High-profit growth |
| EC17 | | High occupation rate growth |
| EC2 | Economic dimension: Cost control | |
| EC21 | | Low labour cost |
| EC22 | | Low cost of their services |
| EC23 | | Low operational cost |
| EC24 | | Low physical capital |
| EC3 | Economic dimension: Market share growth | High rate of new product introduction to market |
| EC31 | | High advertising and marketing intensity |
| EC32 | | Effective development and utilization of their sales force |
| EC33 | | Strong brand identification |

(*Continued*)

**Table 5.** Continued.

| Code | Dimension | Item |
|---|---|---|
| EC34 | | New methods and technologies to create superior products |
| EC35 | | Special products to offer a new consumer group or new market segment |
| CS | Consumer Satisfaction | |
| CS1 | | I am interested in staying/going at this type of hotel/restaurant |
| CS2 | | I will be very happy if I can go at this type of hotel/restaurant |
| CS3 | | I will be very satisfied if a hotel/restaurant can provide such level of service |
| CS4 | | My choice to stay in the hotel/restaurant will be a wise one |
| CS5 | | I think it would be the right thing to stay/go at this type hotel/restaurant |
| CS6 | | This type of hotel/restaurant provides the exact services I need |
| CS7 | | This type of hotel's/restaurant's services would meet my expectations |
| CS8 | | If available. I intend to stay/go at this type of hotel/restaurant |
| CS9 | | I would frequently stay/go at this type of hotel/restaurant |
| CL | Consumer Loyalty | |
| CL1 | | I will recommend this type of hotel/restaurant to my friends. relatives or colleagues |
| CL2 | | I will spread positive recommendations of this type of hotel/restaurant to others |
| CL3 | | I will stay at this type of hotel/restaurant whenever possible |
| CL4 | | I will encourage others to go to this type of hotel/restaurant |
| CWP | Consumer Willingness to Pay | |
| CWP1 | | This type of hotel/restaurant will be my first choice |
| CWP2 | | I am willing to pay a premium to stay at this type of hotel |
| CWP3 | | I am happy to pay more to stay/go at this type of hotel/restaurant |
| CWP4 | | Most of my friends. family or relatives would be willing to pay a premium to stay at this type of hotel |
| CWP5 | | I will pay extra to stay/go at this type of hotel/restaurant |
| CWP6 | | It is worth to pay more to stay/go at this type of hotel/restaurant |

on consumer satisfaction ($\beta = 0.34$, $p < .05$), followed by environmental dimension ($\beta = 0.29$, $p < .05$) and economic dimension ($\beta = 0.14$, $p < .05$).

Findings also suggest that among all three dimensions of sustainability, only economic sustainability practices tend to have a direct impact on consumer loyalty. The impacts of social and environmental sustainability practices on loyalty were found to be mediated by satisfaction. While the reported significant impact of satisfaction on loyalty is similar with the results of earlier studies (Chaudhuri & Holbrook, 2001; Wu & Cheng, 2018), the current study suggests that social and environmental dimensions indirectly impact loyalty through consumer satisfaction. This finding contradicts with previous study findings that reported a direct positive relationship between sustainability practices and consumer loyalty (e.g. Xu & Gursoy, 2015b). This contradictory finding might be due to the fact that European travellers' attitudes and behaviours toward sustainability practices performed by the member of hospitality supply chain were examined in this study, while the study conducted by Xu and Gursoy (2015b) was focused on American travellers' attitudes and behaviours. Nonetheless, this study corresponds to previous research reporting an indirect relationship between sustainability practices and consumer loyalty (e.g. Martinez & del Bosque, 2013). Some of the earlier studies have suggested that the indirect impact of sustainability practices on loyalty might be mediated by other constructs such as service quality (Mandhachitara & Poolthong, 2011), trust in company (Martinez & del Bosque, 2013) and satisfaction. This study also supports this argument.

Moreover, findings reveal that among all three dimensions of sustainability, economic sustainability practices directly influence consumers' willingness to pay higher prices. Contrary to previous studies, sustainability practices related to the social and environment dimensions have an indirect impact on willingness to pay higher prices and are mediated by loyalty and satisfaction. The

difference in results might be explained by the fact that consumers may be willing to pay higher prices if they view the company's sustainability practices as adding value to their experiences with hospitality products and services (Tarfasa & Brouwer, 2013), thereby increasing their satisfaction. Therefore, if sustainability practices increase satisfaction, hospitality consumers may be more willing to pay higher prices for those sustainable products and services compared to practices that do not have any direct impact on their satisfaction (Parsa, Lord, Putrevu, & Kreeger, 2015).

Additionally, this study identified significant positive relationships between economic sustainability practices and individuals' attitudes and behaviours; thereby, adding to extant literature on the impacts of economic sustainability practices on hospitality consumers' attitudes and behaviours, which has been growing in recent years (Buckley, 2012; Xu & Gursoy, 2015a). Findings in this study indicate that hospitality companies' positive financial results including market share, revenue growth and effective cost control can have positive impacts on consumers' satisfaction, loyalty and willingness to pay higher prices. Consumers may care about hospitality companies' operating and profitability efficiencies as positive results may enable companies to provide high-quality hospitality experiences and services and, hence, increase their brand reputation (Xu & Gursoy, 2015a). Positive financial performance may enable hospitality companies to offer additional differentiated and higher quality hospitality experiences and services. Findings also confirm the existence of significant positive relationships between consumer satisfaction and consumer loyalty as well as a significant positive impact of loyalty on consumers' willingness to pay a premium for sustainable products and services, as indicated in extant literature (e.g. Nunkoo et al., 2013).

## Conclusions, implications and limitations

This study investigated the impacts of sustainability practices of companies in a hospitality supply chain on consumers' perceptions and behavioural intentions utilizing data collected from European consumers. Interesting conclusions emerge which inform existing knowledge on sustainable hospitality supply chain management. First, while economic sustainability practices have significant positive impacts on satisfaction, loyalty and willingness to pay higher prices, environmental and social sustainability practices have significant direct positive impacts on satisfaction and indirect impacts on loyalty and willingness to pay higher prices. As the impacts of sustainability practices associated with each dimension on consumers' attitudes and behaviours tend to vary, it is critical for hospitality companies to prioritize their sustainability initiatives and actions based on the estimated positive influence of each sustainability practice on consumers' perceptions and intentions. Second, findings suggest that satisfaction is likely to mediate the impact of environmental and social dimension practices on consumer loyalty. Sustainability practices of companies in a hospitality supply chain can directly influence consumer satisfaction, which in turn may result in higher consumer loyalty and significantly greater willingness to pay higher prices. Furthermore, initiation and implementation of sustainability practices can improve the financial performance of all the members in a hospitality supply chain (Hall et al., 2012). Thus, participation of all the companies that are part of a hospitality supply in sustainability practices can have significant positive impacts on companies' success. Long-term focus on collaboration and cooperation and sharing critical market information may help all companies in the supply chain to maximize their profits.

Members of a hospitality supply chain should develop and improve social and environmental sustainability practices by investing additional resources in those areas that will improve their financial performance. Such strategies may include actions to operating efficiencies by decreasing costs or improving productivity since improvements in operating efficiencies will result in improved financial performance. Improved financial performance can further enable companies to offer higher quality hospitality experiences that may result in higher satisfaction, loyalty and willingness to pay higher prices (Singal, 2014; Sun & Kim, 2013; Xu & Gursoy, 2015a). Additionally, companies in a supply chain can develop human resource policies and practices to recruit and retain locals as employees, who may help hospitality companies to provide outstanding hospitality experiences

with a local flavour. They may also need to provide ongoing training to employees in order to enhance the quality of hospitality experiences provided to consumers and improve the service delivery process, which can provide invaluable value-added benefits to consumer (Kim, Knutson, & Han, 2015). This process may ultimately result in increased loyalty and greater willingness to pay higher prices (Tarfasa & Brouwer, 2013). Furthermore, developing and implementing initiatives and practices to make local businesses part of the supply chain may also improve consumers' perceptions and behavioural intentions. For example, local businesses such as locally-owned farms, local equipment and furniture manufacturers, local craft producers, local educational institutions and so on may be integrated into the supply chain as the upstream members of the hospitality supply chain. These local upstream members can deliver products and services to midstream enterprises such as hotels (Xu & Gursoy, 2015a). For example, hotels and restaurants can directly purchase fresh, flavourful ingredients for their menu items directly from locally-owned farms, furniture from local equipment and furniture manufacturers and local artworks and crafts directly from local artists. Local educational institutions can provide training and educational opportunities to employees so that they advance their careers. Integration of local businesses into the hospitality supply chain as upstream members may have significant impacts on how consumers view those companies in the hospitality supply chain. Integration of local elements such as local customs and culture into the service delivery process and design of facilities is also vital (Kasim, Ekinci, Altinay, & Hussain, 2018). Such integration can help businesses in the supply chain to provide authentic and unique experiences to their end users. Furthermore, such integration might also be viewed as value-added benefits to consumers and, thus, improve their satisfaction and reinforce loyalty and willingness to pay higher prices for that experience (Perez, Garcia de los Salmones, & Rodriguez del Bosque, 2012; Scarpa, Mara, & Kenneth, 2008).

Though this study makes meaningful theoretical and practical contributions to the knowledge in the hospitality field, it is not without limitations. The study focuses only on the sustainability practices of companies that are part of a hospitality supply chain. It does not control for the possible differences that may exist in consumers' perceptions towards sustainability practices of upstream and midstream companies in the supply chain. While some businesses in the hospitality supply chain have close encounters with consumers, others may not have any contacts with consumers. Consumers may not even be aware of the existence of some of the companies that are part of the hospitality supply chain. The level of interaction and consumers' level of knowledge can have significant impacts on consumer perceptions and behavioural intentions. Furthermore, consumers' socio-demographic characteristics and their personality traits may moderate how they view these impacts. Future research should investigate the potential moderating effects of consumers' socio-demographic characteristics and the level of interactions between the relationship of hospitality businesses' sustainability practices and consumer attitudes and behaviours. Though sustainability in the hospitality supply chain management may yield remarkable results for hospitality companies, the costs of developing and implementing those sustainability practices cannot be ignored. This paper primarily focuses on the positive outcomes of sustainability practices, yet does not examine the cost, the type and the number of sustainability practices that need to be developed by each member of a sustainable hospitality supply chain. Future studies should examine the cost structure and the possible benefits of each sustainability practice that each member of a hospitality supply chain may need to develop.

## Note

1. For the environmental, social and economic dimensions, we report only the first-order factors (not the original items). The results for each item are available on request.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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## References

Ashby, A., Leat, M., & Smith, M. H. (2012). Making connections: A review of supply chain management and sustainability literature. *Supply Chain Management: An International Journal*, *17*(5), 497–516.

Bechwati, N. N. (2011). Willingness to pay for professional services. *Journal of Product & Brand Management*, *20*(1), 75–83.

Berezan, O., Raab, C., Yoo, M., & Love, C. (2013). Sustainable hotel practices and nationality: The impact on guest satisfaction and guest intention to return. *International Journal of Hospitality Management*, *34*, 227–233.

Brown, G. (2007). Corporate social responsibility: Brings limited progress on workplace safety in global supply chain. *Occupational Hazards*, *69*(8), 16–20.

Buckley, R. (2012). Sustainable tourism: Research and reality. *Annals of Tourism Research*, *39*(2), 528–546.

Campbell, J., DiPietro, R. B., & Remar, D. (2014). Local foods in a university setting: Price consciousness, product involvement, price/quality inference and consumer's willingness-to-pay. *International Journal of Hospitality Management*, *42*, 39–49.

Cantallops, A. S., & Salvi, F. (2014). New consumer behavior: A review of research on eWOM and hotels. *International Journal of Hospitality Management*, *36*, 41–51.

Chaudhuri, A., & Holbrook, M. (2001). The chain of effects from brand trust and brand affect to brand performance: The role of brand loyalty. *Journal of Marketing*, *65*(2), 81–93.

Chen, M. F., & Tung, P. J. (2014). Developing an extended theory of planned behavior model to predict consumers' intention to visit green hotels. *International Journal of Hospitality Management*, *36*, 221–230.

Chen, R. J. (2015). From sustainability to customer loyalty: A case of full service hotels' guests. *Journal of Retailing and Consumer Services*, *22*, 261–265.

Chi, C. G., & Gursoy, D. (2009). Employee satisfaction, customer satisfaction, and financial performance: An empirical examination. *International Journal of Hospitality Management*, *28*(2), 245–253.

Chin, C. H., Chin, C. L., & Wong, W. P. M. (2018). The implementation of green marketing tools in rural tourism: The readiness of tourists? *Journal of Hospitality Marketing & Management*, *27*(3), 261–280.

Cicerali, E. E., Kaya Cicerali, L., & Saldamlı, A. (2017). Linking psycho-environmental comfort factors to tourist satisfaction levels: Application of a psychology theory to tourism research. *Journal of Hospitality Marketing & Management*, *26*(7), 717–734.

Cronin, J. J., Smith, J. S., Gleim, M. R., Martinez, J., & Ramirez, E. (2011). Green marketing strategies: An examination of stakeholders and the opportunities they present. *Journal of the Academy of Marketing Science*, *39*(1), 158–174.

de Grosbois, D. (2012). Corporate social responsibility reporting by the global hotel industry: Commitment, initiatives and performance. *International Journal of Hospitality Management*, *31*, 896–905.

de Leaniz, P. M. G., & Rodriguez, I. R. D. B. (2015). Exploring the antecedents of hotel customer loyalty: A social identity perspective. *Journal of Hospitality Marketing and Management*, *24*(1), 1–23.

Dick, A. S., & Basu, K. (1994). Customer loyalty: towards an integrated conceptual model. *Journal of the Academy of Marketing Science*, *22*(2), 99–113.

Fornell, C., Rust, R. T., & Dekimpe, M. G. (2010). The effect of customer satisfaction on consumer spending growth. *Journal of Marketing Research*, *47*(1), 28–35.

Gao, Y., & Mattila, A. S. (2014). Improving consumer satisfaction in green hotels: The roles of perceived warmth, perceived competence and CSR motive. *International Journal of Hospitality Management*, *42*, 20–31.

Graci, S. & Kuehnel, J. (2011). *How to increase your bottom line by going green. Green Hotels & Responsible Tourism Initiative*. Retrieved from: http://green.hotelscombined.com/Pages/MainGreen/Downloads/green-hotel-whitepaper.pdf

Guide Jr.V. D. R., Jayaraman, V., & & Linton, J. (2003). Building contingency planning for closed-loop supply chains with product recovery. *Journal of Operations Management*, *21*(3), 259–279.

Guo, X., Ling, L., Yang, C., Li, Z., & Liang, L. (2013). Optimal pricing strategy based on market segmentation for service products using online reservation systems: An application to hotel rooms. *International Journal of Hospitality Management*, *35*, 274–281.

Gursoy, D., Chen, S., G, J., & Chi, C. (2014). Theoretical examination of destination loyalty formation. *International Journal of Contemporary Hospitality Management*, *26*(5), 809–827.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, *19* (2), 139–152.

Hall, J., Matos, S., & Silvestre, B. (2012). Understanding why firms should invest in sustainable supply chains: A complexity approach. *International Journal of Production Research*, *50*(5), 1332–1348.

Han, H., Hsu, L. J., Lee, J. S., & Sheu, C. (2011). Are lodging customers ready to go green? An examination of attitudes, demographics, and eco-friendly intentions. *International Journal of Hospitality Management*, *30*, 345–355.

Holmes, T. J., & Yan, R. (2012). Predicting consumers' preferences for and likely buying of local and organic produce: Results of a choice experiment. *Journal of Food Products Marketing*, *18*(5), 369–384.

Jang, Y. J., Kim, W. G., & Lee, H. Y. (2015). Coffee shop consumers' emotional attachment and loyalty to green stores: The moderating role of green consciousness. *International Journal of Hospitality Management*, *44*, 146–156.

Jensen, M., & Drozdenko, R. (2008). The changing price of brand loyalty under perceived time pressure. *Journal of Product & Brand Management*, *17*(2), 115–120.

Jung, H. S., & Yoon, H. H. (2013). Do employees' satisfied customers respond with an satisfactory relationship? The effects of employees' satisfaction on customers' satisfaction and loyalty in a family restaurant. *International Journal of Hospitality Management*, *34*, 1–8.

Kang, K. H., Stein, L., Heo, C. Y., & Lee, S. (2012). Consumers' willingness to pay for green initiatives of the hotel industry. *International Journal of Hospitality Management*, *31*, 564–572.

Kasim, A., Ekinci, Y., Altinay, L., & Hussain, K. (2018). Impact of market orientation, organizational learning and market conditions on small and medium-size hospitality enterprises. *Journal of Hospitality Marketing & Management*, *27*(7), 855–875.

Kassinis, G. I., & Soteriou, A. C. (2003). Greening the service profit chain: The impact of environmental management practices. *Production and Operations Management*, *12*(3), 386–403.

Kim, H., Cha, J., Singh, A. J., & Knutson, B. (2013). A longitudinal investigation to test the validity of the American customer satisfaction model in the U.S. Hotel industry. *International Journal of Hospitality Management*, *35*, 193–202.

Kim, M., Knutson, B. J., & Han, J. (2015). Understanding employee delight and voice from the internal marketing perspective. *Journal of Hospitality Marketing and Management*, *24*(3), 260–286.

Kotler, P. & Keller, K. (2006). *Marketing management*. Upper Saddle River: Prentice Hall.

Lee, S., & Heo, C. Y. (2009). Corporate social responsibility and customer satisfaction among US publicly traded hotels and restaurants. *International Journal of Hospitality Management*, *28*, 635–637.

Lee, J. S., Hsu(Jane), L.-T., Han, H., & Kim, Y. (2010). Understanding how consumers view green hotels: How a hotel's green image can influence behavioural intentions. *Journal of Sustainable Tourism*, *18*(7), 901–914.

Lee, C., Segal, R., Kimberlin, C., Smith, W. T., & Weiler, R. M. (2014). Reliability and validity for the measurement of moral disengagement in pharmacists. *Research in Social and Administrative Pharmacy*, *10*(2), 297–312.

Lee, C., Song, H., Lee, H., Lee, S., & Bernhard, B. J. (2013). The impact of CSR on casino employees' organizational trust, job satisfaction, and customer orientation: An empirical examination of responsible gambling strategies. *International Journal of Hospitality Management*, *33*, 406–415.

Liu, S. Q., & Mattila, A. S. (2016). The influence of a "green" loyalty program on service encounter satisfaction. *Journal of Services Marketing*, *30*(6), 576–585.

Lo, A., King, B., & Mackenzie, M. (2017). Restaurant customers' attitude toward sustainability and nutritional menu labels. *Journal of Hospitality Marketing & Management*, *26*(8), 846–867.

Lo, A., Wu, C., & Tsai, H. (2015). The impact of service quality on positive consumption emotions in resort and hotel spa experiences. *Journal of Hospitality Marketing and Management*, *24*(2), 155–179.

Loureiro, S. M. C., & Kastenholz, E. (2011). Corporate reputation, satisfaction, delight, and loyalty towards rural lodging units in Portugal. *International Journal of Hospitality Management*, *30*, 575–583.

Lu, W., & Stepchenkova, S. (2012). Ecotourism experiences reported online: Classification of satisfaction attributes. *Tourism Management*, *33*(3), 702–712.

Mandhachitara, R., & Poolthong, Y. (2011). A model of customer loyalty and corporate social responsibility. *Journal of Services Marketing*, *25*(2), 122–133.

Martinez, P., & del Bosque, I. R. D. (2013). CSR and customer loyalty: The roles of trust, customer identification with the company and satisfaction. *International Journal of Hospitality Management*, *35*, 89–99.

McDougall, G. H. G., & Levesque, T. (2000). Customer satisfaction with services: Putting perceived value into the equation. *Journal of Services Marketing*, *14*(5), 392–410.

Miles, R. E., & Snow, C. C. (2007). Organization theory and supply chain management: An evolving research perspective. *Journal of Operations Management*, *25*, 459–463.

Molina-Azorin, J. F., Claver-Cortes, E., Lopez-Gamero, M. D., & Tari, J. T. (2009). Green management and financial performance: A literature review. *Management Decision*, *47*(7), 1080–1100.

Namkung, Y., & Jang, S. S. (2017). Are consumers willing to pay more for green practices at restaurants? *Journal of Hospitality & Tourism Research*, *41*(3), 329–356.

Nunkoo, R., Gursoy, D., & Ramkissoon, H. (2013). Developments in hospitality marketing and management: Social network analysis and research themes. *Journal of Hospitality Marketing and Management*, *22*(4), 269–288.

Onozaka, Y., & Mcfadden, D. T. (2011). Does local labeling complement or compete with other sustainable labels? A conjoint analysis of direct and joint values for fresh produce claim. *American Journal of Agricultural Economics*, *93*(3), 693–706.

Parsa, H. G., Lord, K. R., Putrevu, S., & Kreeger, J. (2015). Corporate social and environmental responsibility in services: Will consumers pay for it? *Journal of Retailing and Consumer Services*, *22*, 250–260.

Pena, A. I. P., Jamilena, D. M. F., & Molina, M. A. R. (2013). Antecedents of loyalty toward rural hospitality enterprises: The moderating effect of the customer's previous experience. *International Journal of Hospitality Management*, *34*, 127–137.

Perez, A., Garcia de los Salmones, M. M., & Rodriguez del Bosque, I. (2012). The effect of corporate associations on consumer behaviour. *European Journal of Marketing*, *47*(1), 218–238.

Rather, R. A. (2018). Investigating the impact of customer brand identification on hospitality brand loyalty: A social identity perspective. *Journal of Hospitality Marketing & Management*, *27*(5), 487–513.

Rosseel, Y. (2012). Lavaan: An R package for structural equation modeling. *Journal of Statistical Software*, *48*(2), 1–36.

Sanchez-Fernandez, R., & Iniesta-Bonillo, M. A. (2009). Efficiency and quality as economic dimensions of perceived value: Conceptualization, measurement, and effect on satisfaction. *Journal of Retailing and Consumer Services*, *16*, 425–433.

Scarpa, R., Mara, T., & Kenneth, T. (2008). Utility in willingness to pay space: A tool to address confounding random scale effects in destination choice to the Alps. *American Journal of Agricultural Economics*, *90*(4), 994–1010.

Shi, Y., Prentice, C., & He, W. (2014). Linking service quality, customer satisfaction and loyalty in casinos, does membership matter? *International Journal of Hospitality Management*, *40*, 81–91.

Shin, Y. H., Im, J., Jung, S. E., & Severt, K. (2017). Consumers' willingness to patronize locally sourced restaurants: The impact of environmental concern, environmental knowledge, and ecological behavior. *Journal of Hospitality Marketing & Management*, *26*(6), 644–658.

Singal, M. (2014). The link between firm financial performance and investment in sustainability initiatives. *Cornell Hospitality Quarterly*, *55*(1), 19–30.

Sipe, L. J., & Testa, M. R. (2018). From satisfied to memorable: An empirical study of service and experience dimensions on guest outcomes in the hospitality industry. *Journal of Hospitality Marketing & Management*, *27*(2), 178–195.

Slevitch, L., Mathe, K., Karpova, E., & Scott-Halsell, S. (2013). 'Green' attributes and customer satisfaction. *International Journal of Contemporary Hospitality Management*, *25*(6), 802–822.

Sun, K., & Kim, A. (2013). Does customer satisfaction increase firm performance? An application of American customer satisfaction index (ACSI). *International Journal of Hospitality Management*, *35*, 68–77.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics*. New York: Allyn and Bacon.

Tarfasa, S., & Brouwer, R. (2013). Estimation of the public benefits of urban water supply improvements in Ethiopia: A choice experiment. *Applied Economics*, *45*(9), 1099–1108.

Teng, C. C., Horng, J. S., Hu, M. L., Chien, L. H., & Shen, Y. C. (2012). Developing energy conservation and carbon reduction indicators for the hotel industry in Taiwan. *International Journal of Hospitality Management*, *31*, 199–208.

Thompson, A. (2007). Survey: Europeans More 'Green' than Americans. In *Live Science*. Retrieved from http://www.livescience.com/4695-survey-europeans-green-americans.html

Wang, Y. F., Chen, S. P., Lee, Y. C., & Tsai, C. T. (2013). Developing green management standards for restaurants: An application of green supply chain management. *International Journal of Hospitality Management*, *34*, 263–273.

Wheaton, B., Muthen, B., Alwin, D. F., & Summers, G. (1977). Assessing reliability and stability in panel models. *Sociological Methodology*, *8*(1), 84–136.

Wu, H. C., & Cheng, C. C. (2018). What drives experiential loyalty toward smart restaurants? The case study of KFC in Beijing. *Journal of Hospitality Marketing & Management*, *27*(2), 151–177.

Xu, X., & Gursoy, D. (2015a). A conceptual framework of sustainable hospitality supply chain management. *Journal of Hospitality Marketing and Management*, *24*, 229–259.

Xu, X., & Gursoy, D. (2015b). Influence of sustainable hospitality supply chain management on customers' attitudes and behaviors. *International Journal of Hospitality Management*, *49*, 105–116.

Yu, Y., Li, X., & Jai, T. (2017). The impact of green experience on customer satisfaction: Evidence from TripAdvisor. *International Journal of Contemporary Hospitality Management*, *29*(5), 1340–1361.

Zhang, X., Song, H., & Huang, G. Q. (2009). Tourism supply chain management: A new research agenda. *Tourism Management*, *30*(3), 345–358.