THE EFFECTS OF SUSTAINABLE HOSPITALITY SUPPLY CHAIN ON CUSTOMER SATISFACTION AND CUSTOMER REPURCHASE INTENTIONS

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ABSTRACT

Purpose: Sustainability is seen as an activity that promotes organizational growth through customer satisfaction. The current trend suggests that customers have high concerns about sustainability in the hospitality sector. The focused of this study looked into the sustainable hospitality supply chain impact on customer satisfaction and customer repurchase of hospitality services.

Methods: Utilizing data obtained from customers patronizing any of the hospitality services (hotels accommodation, conferences and restaurants) in Ghana. The study focused on validating and testing a hypothesized model using the SmartPLS tool.

Results and Conclusion: The result indicates a significant positive relationship between all the sustainable dimensions (economic, environmental, and social). These findings suggest that customer satisfaction is influenced by sustainable supply chain dimensions. The findings further revealed that the environmental dimension of sustainability provides a direct and significant relationship to customer repurchase of hospitality services, but the economic and social dimensions influence customer repurchase of hospitality services through customer satisfaction.

Implication of Research: The findings of this study will enable practitioners and policymakers to understand sustainability practices in hospitality firms and assist them to prioritize, align or realign their limited resources on the sustainable dimensions since there is varying degree of impact of each dimension.

Originality/Value: This paper adds to the existing findings by demonstrating the larger impact of sustainability in promoting customers retention for hospitality services. The study is unique as it shows the role of customers satisfaction in the relationship between sustainability dimension and customers retention for hospitality services. It provides evidence that sustainability dimensions is not a direct consequence of customer retention unless there is sufficient customer satisfaction for that sustainable dimension.

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OS EFEITOS DA CADEIA DE ABASTECIMENTO DE HOSPITALIDADE SUSTENTÁVEL NA SATISFAÇÃO DO CLIENTE E NAS INTENÇÕES DE RECOMpra DO CLIENTE

RESUMO

Finalidade: A sustentabilidade é vista como uma atividade que promove o crescimento organizacional através da satisfação do cliente. A tendência atual sugere que os clientes têm grandes preocupações sobre a sustentabilidade no sector hoteleiro. O foco deste estudo analisou o impacto da cadeia de suprimentos de hospitalidade sustentável na satisfação do cliente e na recompra de serviços de hospitalidade pelo cliente.

Métodos: Utilizando dados obtidos de clientes que frequentam qualquer um dos serviços de hospitalidade (alojamento em hotéis, conferências e restaurantes) em Gana. O estudo focou na validação e teste de um modelo hipotético usando a ferramenta SmartPLS.

Resultados e Conclusão: O resultado indica uma relação positiva significativa entre todas as dimensões sustentáveis (económica, ambiental e social). Essas descobertas sugerem que a satisfação do cliente é influenciada pelas dimensões sustentáveis da cadeia de suprimentos. As conclusões revelaram ainda que a dimensão ambiental da sustentabilidade proporciona uma relação direta e significativa com a recompra de serviços de hotelaria pelo cliente, mas as dimensões económica e social influenciam a recompra de serviços de hotelaria pelo cliente através da satisfação do cliente.

Implicação da Pesquisa: Os resultados deste estudo permitirão que profissionais e governantes entendam as práticas de sustentabilidade em empresas de hospitalidade e auxiliá-los a priorizar, alinhar ou realinhar seus recursos limitados nas dimensões sustentáveis, uma vez que há um grau variável de impacto de cada dimensão.

Originalidade/Valor: Este artigo complementa as descobertas existentes, demonstrando o maior impacto da sustentabilidade na promoção da retenção de clientes para serviços de hospitalidade. O estudo é único, pois mostra o papel da satisfação dos clientes na relação entre a dimensão da sustentabilidade e a retenção dos clientes para serviços de hospitalidade. Proporciona provas de que as dimensões da sustentabilidade não são uma consequência direta da retenção dos clientes, a menos que haja satisfação suficiente do cliente para essa dimensão sustentável.

Palavra-chave: cadeia de fornecimento de hospitalidade sustentável, satisfação do cliente, intenções de recompra do cliente.

1 INTRODUCTION

In time past, supply chain management focus on production and delivery of raw material to the stage of the final user. With the prevalence and increased in the number of organizations, supply chain has been seen as a tool used to gain competitive advantage.
This therefore requires that certain measures be adopted to meet the requirement and specification of customer. Due to this reasons, the advent of sustainability has been inculcated into the broader discussion on how organizations can adapt and practice in their supply chain (Faisal, 2010). The persistence of stakeholders contributes highly to organizations acceptance for sustainability in the hospitality supply chain. Verma (2014) asserts that organizations need to be responsive towards the demands of various stakeholders of the society and install systems and processes which maximize environment conservation and minimize negative environmental impact of these processes. Previous studies have explore supply chain management to which have expand and broaden the protection of the environment to be included in the field of supply chain management (Tseng & Chiu, 2013; Zeng et al., 2017; Zhang et al., 2018). Gawankar (2017), asserts with the view that in the past, supply chain management was hindered due to less prevalence in globalization and digitization because it required more customer relationship building experience to enhance performance in the organization. The view supports that organizational performance increases as a result of supply chain practices. Consequently, whilst supply chain management have previously place emphasis on inventory management control, it has however expanded to include factors such as customer sensitivity, strengthened customer support, loyalty, enhanced shift efficiency, market competitiveness, better customer engagement and greater marketing capabilities (Das & Hassan, 2021; Debnath & Islam, 2017; Zhang et al., 2018). In a further study conducted by Budhiartini et al. (2020), sustainable supply chain management SSCM practices has a significant association with the organization sustainable performance OSP. Organization have resorted to sustainable practices into their supply chain as a way of protecting and preserving the environment, ensuring higher returns and improving the business viability and reputation as well as financial success in an intensely competitive local and international market environment (Das & Hassan, 2021; Rahman et al., 2019; Rahmani & Yavari, 2018).

According to Koberg and Longoni (2019), business and suppliers are being held liable for the effect their operational activities have on the environment, economy and social. The sustainable hospitality supply chain management strategies are therefore required to improve businesses to sustain growth (either, economic environment and social). The resort to attain sustainable supply chain must be focus on integrating economic, environment and social dimensions across an organizational supply chain.

(Carter & Rogers, 2008; Koberg & Longoni, 2019). In a related study conducted, the view express is that organizations’ sole aim no longer can be just improvement of its performance but its policies must be environment friendly as well (Verma, 2014). However Sustainable managing on the contrary continues to be a challenge in the global supply chain system. In recent times at the global level, supply chain sustainability has piqued with much interest from the industrial sector and the hospitality industry which is seen to be accepting sustainability. The reasons accounting for the high interest in sustainability is the pressures stakeholders mount on these sectors to imbibe on their supply chain (Xu & Gursoy, 2015a; Manavalan & Jayakrishna, 2018). The other reason is that sustainability in hospitality has become an essential determinant influencing consumer perceptions and decision-making aspects such as the repurchase intentions of customers in the hospitality firms (Teng, Horng, Hu, Chien, & Shen, 2012). In many nations, sustainability issues are raised as key areas that promotes continuous business development, civilization in humans, government as well as environment obligated businesses (Das & Hassan, 2021; Vijayvargy, 2017). Although there are several studies on sustainable supply chain management, there seems to be a single way approach of sustainable supply chain in prior studies. In many studies, sustainability is approached on the environmental perspective, such as the green supply and other societal issues like the corporate social responsibility (Martínez & Rodríguez, 2013). But as Xu and Gursoy (2015a, p. 229) stated (pointed out in Modica et al., 2018) that ‘true sustainability can be achieved only if all members of a supply chain participate in sustainability practices’. In a conceptual framework further developed by Xu and Gursoy (2015a), the supply chain is acknowledged as possessing specific characteristics that emanate from both manufacturing and service supply chains. The view is that 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 et al., 2012).

The sustainable hospitality supply chain impact on the perceived behavior of customers have received less attention from academic so far in developing countries with rare studies on the three-sustainability dimensional impact on the behavior of the customer. But in an earlier study investigated by Modica et al. (2018) on the impact of environment, social and economic dimensions of sustainable hospitality supply chain on the behavior of tourist visiting south Sardinia as consumers of the hospitality industry, their findings indicates that the economic dimensions of sustainability directly influences
customer satisfaction and along with their loyalty and willingness to pay premium for hospitality services. However, the findings further indicated that environment and social dimensions directly influence customer satisfaction but indirectly influence customers’ loyalty and willingness to pay a premium for hospitality services. In their study, they argued that evidence provided was limited to a specific area and therefore their study could not be applied to all inclusive due to social demographic characteristics and personal traits. This study therefore seeks to investigate critically the sustainable hospitality supply chain effects on customer satisfaction and the repurchase intentions.

The study develops and tests a research model to critically examine the three dimensions approach of sustainable supply chain (economic, environment, and social) effects on customers’ behavior across hospitality firms in Ghana. To examine this, we look at the environment, social, and economic impact of sustainable hospitality supply chain on customer satisfaction and the repurchase intentions.

The paper is structured as follows: the next section espouses the foundation upon which the theory and hypothesis of the study is developed. This follows the methodology section, which contains the study data, sample selection, and the justification for the use of the PLS-SEM for the analysis of this study. The rest of the section comprises the data analysis and discussion which contain the assessment of the measurement model and structural model. The findings are also discussed and the conclusion and implication of the study to policy and practice.

2 THEORETICAL AND HYPOTHESIS DEVELOPMENT

Supply chain activities are critical in the growth of any industry. The stringent actions adopted by an organization determine its ability to perform in terms of sales and growth. The adoption of sustainability as part of the supply chain activities can significantly affect the desire growth and sales in the hospitality industry. The paragraph below in the paper highlights at length the theoretical framework and also previous assertions to develop the hypothesis on Figure 1.

2.1 EVALUATIVE CONGRUITY THEORY

The paper adopted the evaluative congruity or the social cognitive model which is widely known to have been developed by a renowned author Sirgy (1984). The model postulates that due to this evaluative congruity, is a matching process that involves...
cognitive in which perception is aligned to stimulate referent cognition to evaluate an action. There is a general believe that output of the cognitive process produces either emotional or motivational state. The state of satisfaction and dissatisfaction of the customers appeals to the emotional state since it causes the client to choose other course of actions to minimize a dissatisfaction state and or to continue a future satisfaction state (Sirgy, 1984). The concept is similar to the view of confirmation and disconfirmation model. The congruity produces a state of cognitive which provide a fair assessment state or a satisfied state where there are minor omissions between a perceptions and evoked cognition referent. This is in comparison to the expectancy disconfirmation paradigm. The congruity model presents a view that the presence of several comparisons processes provides better meaning to clients-satisfaction or dissatisfaction as a function of one or several congruities between perceptual and evoked state of referent. The ability of congruity evaluative Theory to explain the various states of satisfaction and dissatisfaction brought on by various combinations of assumptions and performance outcomes appears to be one of its most significant characteristics (Chon, 1992). This is in line Expectancy-Disconfirmation paradigm which maintained that the state of satisfaction will be the same whether low expectations are met by low performance or high expectations are met by high performance. However the theory of Evaluative Congruity asserts that the expectation performance (high expectation/high performance; low expectation/low performance) would lead to various levels of satisfaction (Chon, 1992; Chon & Olsen, 1991; Sirgy, 1984). Moreover, Sirgy contends that consumer satisfaction or dissatisfaction is not only an evaluative function of the consumer's expectations and performance, but also their self-image and product image congruity. The product image is classified as a functional benefit associated to the product and as symbolic (i.e., self-image). Eventhough the evaluative congruity theory main focus is on how product manufactured evoke either a satisfactorily or unsatisfactorily response from customers of the organization. This paper amplifies that sustainable supply chain dimensions also evoke a certain level of satisfaction from customers in the hospitality industry. There is a wide acceptance that the Evaluative Congruity model can be an possible explanation for the satisfaction process, as it mechanism is can be liken to that of the Expectancy-Disconfirmation paradigm (Oh & Parks, 1996). The disconfirmation concept underpins both the Expectation-Disconfirmation model and Evaluative Congruity, which postulates that customers forms an expectation about a product prior to its purchase. Both models
may be unsuitable in situations where the customers have no prior expectations such as when purchasing unfamiliar products.

2.2 SUSTAINABLE SUPPLY CHAIN MANAGEMENT AND CUSTOMER PERCEPTIONS

2.2.1 The Influence of Customer Satisfaction on Customer Repurchase

Several studies have argued that customer satisfaction initiate customers repurchase intention (Gursoy, Chen, & Chi, 2014). The direct connection is highly noticed in the hospitality context (Nunkoo, Smith, & Ramkissoon, 2013). In many instances, the positive link in sustainable practices and customer satisfaction causes customer repurchase of the hospitality services. For example, the positive influence of customer satisfaction on customer loyalty is evident in repeat purchases in the hospitality services. (Loureiro and Kastenholz, 2011). The direct relationship between customers’ satisfaction with hotels and their repurchase of the hospitality services has been solid and strong in the last several decades, no matter what the economic circumstance (Choi & Kim, 2013). Customer satisfaction is seen to mediate the relationship in sustainability and customer loyalty which improve their repeat purchase of hospitality services (Modica et al., 2018; Xu & Gursoy, 2015b). Based on the preceding discussion, this study proposes the following hypothesis:

H1: Customer satisfaction influence customer repurchase of hospitality services

2.2.2 Economic Dimension of Sustainable Supply Chain and Customer Satisfaction

This dimension in the sustainability supply chain of the hospitality industry seeks to eradicate the negative social and environmental impact whiles enhancing the performance of business which improves revenue growth, market shares expansion and cost control. Increased revenue can be obtained as a result of the loyalty from the business customers, enhanced efficiency in operations and management of risk (Goodman, 2000). The evaluation in the maintenance and housekeeping practices, the use of durability fixtures and fittings as well as employee efficiency capacity building are some methods for cost control that can be employed (Kasim et al., 2014; Schendler, 2001) An increase in market share enhances reputation which increases demands of the customer for the business services (Nair and Narasimhan, 2006). Furthermore, supply chain sustainability promote advertising to draw more environmentally friendly clients that are prepared to pay extra for green policies (Kang et al., 2012), which may positively impact a company's
bottom line. The absence of profit generating ability causes an obstacle for businesses to develop and implement sustainability practices in the hospitality sector. Which according to them pursuing continuous survival and growth enhances profit that is good for any firm (Xu & Gursoy, 2015a).

Good financial performance also enables businesses to improve their relationships with their stakeholders such as owners, clients, employees, government, communities (Assaf & Josiassen, 2012; Xu & Gursoy, 2015b). The financial performance of a company can positively impacts on the economy of the communities in which it operates by creating jobs, paying taxes and collaborating.

$H_{2a}$: Economic dimension of sustainable hospitality supply chain positively influence customer satisfaction in the hospitality industry

$H_{2b}$: Economic dimension of sustainable hospitality supply chain positively influence customer repurchase intentions.

Figure 1: conceptual framework

Source: Author’s construct
2.2.3 Environmental Dimension of Sustainability Supply Chain and Customer Satisfaction

In the environment, conscious business practices are referred to as environmentally friendly actions. Hospitality researchers focused most the aspect of the environment sustainability such as environmental collaborations and environmental monitoring (Xu & Gursoy, 2015a). In environmental collaboration it entails the design of products, the design of service process, the management of products during use, life extension of products and re-use has all been discussed in those studies (Goodman, 2000). The design of product is primarily incorporated by acquiring greener products with limited consequences on the environment such as the use of nontoxic cleaning chemicals instead of the toxic cleaning chemicals (Xu & Gursoy, 2015a). Goodman (2000), postulate that information sharing is made possible by the use of environmental systems management like temperature control systems which can be used to evaluate and control the environmental effect of the hospitality businesses.

According to Berezan et al. (2013), customer satisfaction is likely to be positively impacted by the environmental component of sustainable hospitality supply chain management because eco-friendly businesses would address the economic and social interfaces within the natural environment and thereby be seen as more stable and complete organizations. The actions a company takes to protect the environment could be seen as a crucial component of the services it provides, which boosts customer satisfaction (Xu & Gursoy, 2015b). More particularly, the hospitality industry has long faced pressure to reduce its environmental impact from environmentalists and other grassroots organizations because it is an industry that uses a lot of energy, consumes a lot of natural resources, and produces a lot of waste (Xu & Gursoy, 2015b). As a result of this pressure, the hospitality industry adopted several eco-friendly initiatives to lessen its "environmental footprint," which turned out to be a successful strategy for enhancing customer satisfaction (Prud & Raymond, 2013). Lisa and Mattila (2014), further suggest that customers are more likely to be satisfied with companies that use relatively more environmentally friendly service delivery methods than other companies. Consequently, the use of green practices in hotels is likely to have a significant impact on customers’ satisfaction (Berezan et al., 2013).

H3a: Environmental dimension of sustainable hospitality supply chain positively influences customer satisfaction.
H\textsubscript{3b}: Environmental dimension of sustainable hospitality supply chain positively influence customer repurchase intentions.

2.2.4 Social Dimension of Sustainability Supply Chain and Customer Satisfaction

Social dimension of sustainability supply chain is concern with individual both external and internal to a company. Employees are the most common internal people. To ensure that employees provide the highest quality service possible, employers need to provide adequate training (Xu & Gursoy, 2015a). However, companies must also create and institute strategic policies to improve employee well-being which can encourage staff to view the hospitality sector as a permanent career rather than contract jobs (Goodman, 2000). According to Costen and Salazar (2011), and Chi and Gursoy (2009), they postulated that enhancing employee conditions of service is likely to produce satisfaction and maintain loyalty of employees that will aid businesses in achieve financially in their activities by offering better quality services. Training programs provided will benefit people outside the company and this will improve satisfaction of clients (Xu & Gursoy, 2015a). In addition to customers, businesses place a high value on other interested parties such as government, communities, and suppliers. Sustainability efforts toward the social dimension should be instituted to improve their welfare and interests. Businesses could promote fair trade and use customer relationship management techniques to better involve their customers, which could enhance their satisfaction and loyalty (Xie & Chen, 2013; Xu & Gursoy, 2015a). Siguaw (1999), opined that businesses could control their relationships with the community by acting as good corporate citizens and participating in local initiatives.

The satisfaction of customer can be enhanced through taking responsible social actions toward internal and external stakeholders. Customers today are more concerned with employee welfare and working conditions. Customer satisfaction can be positively influenced by the social dimension of sustainable hospitality supply chain management (Costen & Salazar, 2011; Xu & Gursoy, 2015b).

H\textsubscript{4a}: Social dimension of sustainable supply chain positively influence customer satisfaction in the hospitality industry

H\textsubscript{4b}: Social dimension of sustainable hospitality supply chain positively influence customer repurchase intentions.
3 RESEARCH METHODS

3.1 DATA COLLECTION AND SAMPLING

To test the hypotheses stated above of this study, cross sectional survey was design and pre-tested to improve the consistency and validity of the data from customers who patronize hospitality services. The services of this major hotels included accommodation, restaurant and conference hosting. The survey was self-administered to obtain the requisite responses and to enhanced social-demographic diversity. Consistent with the study of Modica et al. (2018) and Xu & Gursoy (2015b), The survey contained the explanation of the sustainable hospitality supply chain. Personal surveys of Ghanaian hotel customers were used to collect data for the study. Individuals aged 18 and above who patronizes any one of the country’s hoteliers is included in the target population. Respondents were intercepted at the point of patronage and exit at the various hotels which make the sampling method non probability and purposive sampling. However, three survey locations were identified in each of the low, middle, and high-income individuals in each of Ghana’s three most populous cities (Accra, Tamale, and Kumasi) to ensure a fair representation of the target population. To avoid bias in the selection process, every respondent was approached for consent and participation in the study at each survey point. After deleting incomplete responses and treating outliers, a total of 432 valid responses were obtained during the months of July and August of 2023. We used both online method by employing google forms and paper-pen physical collection of data. The manual data was manually included to the online downloaded data.

3.2 MEASURES

The survey was design in Likert scale format with (1) for strongly disagree to (5) for strongly agree in the first four sections contained in the survey. The design of questionnaire was in two parts. The first section contained information relating to the respondent’s bio-data of respondents. The second section contained items used to measure the perceptions of customers on the sustainability of the hospitality supply chain. The second part, first contained economic dimension of sustainability on customer perception. It includes items such as cost control, income growth and expansion of the market share (Modica et al., 2018; Xu & Gursoy, 2015b). The next contained the views of customers on the environmental dimension of sustainability. It also contained items of products design, service process design, reuse and recycling management of product
service delivery, waste and pollution management (Modica et al., 2018; Xu & Gursoy, 2015b). The third dimension also contained items measuring the social sustainability on customer perception and this include items such as employees, communities, consumers, (Modica et al., 2018; Xu & Gursoy, 2015b). The fourth and fifth contained indicators measuring the views and perceptions of customers in the hospitality firms relating to their satisfaction and customer repurchase intention of the services the hospitality industry provide in (Kim et al., 2012; Majeed et al., 2022).

3.3 DATA ANALYSIS

The structural equation modelling (PLS-SEM) data was analyzed using the SmartPLS version 4.0.8.7. Structural Equation Modeling is a statistical technique used to examine both direct and indirect relationships between two or more independent latent variables and one or more dependent latent variables (Gefen et al., 2000). In order words, PLS is a causal prediction method to hypothesis testing that fits the research’s prediction-oriented goal (Cheah et al., 2018). PLS-SEM is one of the most widely used structural equation modelling (SEM) tools for data analysis (Henseler et al., 2016). The paper examines the relationship between three exogenous constructs on an endogenous construct. A total of five latent constructs were used in this particular study: customer satisfaction, customer repurchase intentions, environment, social and economic dimensions of sustainable supply chain. Each of these constructs were assigned indicators. We conducted reliability/validity test (α, CR, AVE and rho _ A) and path analysis (β, t-test and p-values).

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. Almost 40% of the respondents were married while those being single represented 37.2% of the sample. Around 44% of the customers procure the services of the accommodation.

4 RESULTS

The table 1 reports on the properties observed in the measurement model of the study. The measurement model is used to assess the validity and reliability of a model. It can be observed that the convergent validity of the study is reported at AVE values of 0.738 to 0.919 above the normal threshold of 0.5 for all the constructs used for the study.
Therefore, it can be confirmed that the presence of convergent validity was met. From table 2, it can be reported that discriminant validity was established since each constructs correlated more when compared against itself than other constructs. It was also observed that indicator loadings of each of the constructs was higher than the normal threshold of 0.708 which confirms that each indicator was a good measure to the major construct. Furthermore, the composite reliability results prove the presence of reliability in the study. The composite reliability results range from 0.862 to 0.978 above the threshold 0.700 which confirms the presence of reliability in the results.

<table>
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<tr>
<th>Table 1: Construct validity and reliability</th>
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<tr>
<td>Construct</td>
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<tr>
<td>Repurchase intention</td>
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<td></td>
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<tr>
<td>Customer satisfaction</td>
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<td>Economic dimension</td>
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<td>Environment dimension</td>
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<tr>
<td>Social dimension</td>
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Source: Fieldwork, 2023

<table>
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<tr>
<th>Table 2: Discriminant validity: Fornell-Larcker criterion</th>
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<tr>
<td>Constructs</td>
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<tr>
<td>CR</td>
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<tr>
<td>CS</td>
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<td>EC</td>
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<td>EN</td>
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<td>SO</td>
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Source: Fieldwork, 2023

The structural model was next to be assessed in the PLS SEM analysis. The results of the study in table 3 shows the presence of no collinearity issues. The results show a VIF values of less than 5 indicating no collinearity between constructs. This means that variables are not highly correlated among the other and must fall below a threshold of 0.5
proving the presence of no collinearity. Table 4 presents on the R square results of the study and this shows the variation that accounts for through the use of the endogenous variables on the exogenous variable in the study. The results therefore shows that 69.5% of sustainable hospitality supply chain practices accounts for customer satisfaction in hospitality firms. The result further shows that customer satisfactions influence 91.7% of the customers repurchase of the hospitality services. Table 5 presents the results of the effect size of each independent constructs on the dependent construct. Cohen provides that large effect size should range from 0.35 and above and the results of the study shows that the F square value for customer satisfaction on customer repurchase is 1.851 above the threshold of 0.35 meaning there is large effect size of customer satisfaction on customers repurchase of the hospitality service which again have manifested in table 4 and 6. The results also show moderate effect size of (economic, environment and social) sustainable practices on customer satisfaction as it obtained values of 0.158, 0.134 and 0.284 respectively indicating moderate effect size on customer satisfaction. The results further show small effect size of (economic and social) sustainable practices on customer repurchase of hospitality services. This value ranges from 0.001 and 0.0014 below the threshold of 0.0015 as indicated by Cohen. Table 6 presents the summary results for the hypothesis testing.

As establishes in table 6, the results showed the standardized path coefficients of the economic, environment and social dimensions of sustainable hospitality supply chain on customer satisfaction and customer repurchase of hospitality services for business continuity. The findings indicated that only economic and environment dimensions of sustainable hospitality supply chain on customer satisfaction were significant and positive (H2b: β2b= 0.228, P value= 0.000; H3b: β3b= 0.319, P value= 0.000). However, with this finding (H4b: β4b= -0.469, P value= 0.000) there was negative significant impact of the social dimension of the sustainable hospitality supply chain on customer satisfaction for business continuity. In terms of customer repurchase of hospitality services, the finding (H3a: β3a= 0.254, P value= 0.000) indicates that only the environment dimension of sustainable supply chain influence customer repurchases of hospitality services. Again, the finding further show that the economic and social dimension do not influence customers repurchases of hospitality services. It can also be noticed from the study that customer satisfaction influences their repurchases of hospitality services. Table 6b, provides that (H5b: β5b= 0.162, P value= 0.000; H5c: β5c= 0.226, P value= 0.000), which
indicate an indirect significant and positive mediation of customer satisfaction on economic and environment sustainable dimensions and customer repurchase of hospitality services. However, there was indirect significant but negative relationship mediation of customer satisfaction on social sustainable dimension and customer repurchase of hospitality services.

<table>
<thead>
<tr>
<th>Construct</th>
<th>CR</th>
<th>CS</th>
<th>EC</th>
<th>SO</th>
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<tbody>
<tr>
<td>Customer Repurchase</td>
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<tr>
<td>Customer Satisfaction (CS)</td>
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<tr>
<td>Economic (EC)</td>
<td>1.246</td>
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<tr>
<td>Environment (EN)</td>
<td>2827</td>
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<td>Social (SO)</td>
<td>3265</td>
<td>2.543</td>
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</table>

Table 3: Multicollinearity Statistics- VIF

Source: Fieldwork, 2023

Figure 2: Indicator Loadings and Coefficients of Determination

Source: Field work
The Effects of Sustainable Hospitality Supply Chain on Customer Satisfaction and Customer Repurchase Intentions

### Table 4: R square

<table>
<thead>
<tr>
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<th>R- Square Adjusted</th>
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<tbody>
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<td>CR</td>
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<td>0.917</td>
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<tr>
<td>CS</td>
<td>0.695</td>
<td>0.693</td>
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Source: Fieldwork, 2023

### Table 5: F Square

<table>
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<tr>
<th>Construct</th>
<th>CR</th>
<th>CS</th>
<th>EC</th>
<th>EN</th>
<th>SO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Repurchase (CR)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Satisfaction (CS)</td>
<td>1.851</td>
<td>0.001</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic (EC)</td>
<td>0.001</td>
<td></td>
<td>0.158</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment (EN)</td>
<td>0.275</td>
<td></td>
<td>0.134</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social (SO)</td>
<td>0.0014</td>
<td></td>
<td>0.284</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Fieldwork, 2023

### Table 6: Structural model hypothesis testing for direct effect

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Constructs</th>
<th>Std. Beta</th>
<th>(t-values)</th>
<th>P Values</th>
<th>Decision</th>
<th>5% CI L</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>(CS) &gt; CR</td>
<td>0.709</td>
<td>25.697</td>
<td>0.000</td>
<td>Supported</td>
<td>0.660</td>
<td>0.748</td>
</tr>
<tr>
<td>H2a</td>
<td>(EC) &gt; CR</td>
<td>-0.011</td>
<td>1.063</td>
<td>0.288</td>
<td>Not supported</td>
<td>-0.030</td>
<td>0.005</td>
</tr>
<tr>
<td>H2b</td>
<td>(EC) &gt; CS</td>
<td>0.228</td>
<td>6.987</td>
<td>0.000</td>
<td>Supported</td>
<td>0.177</td>
<td>0.283</td>
</tr>
<tr>
<td>H3a</td>
<td>(EN) &gt; CR</td>
<td>0.254</td>
<td>9.694</td>
<td>0.000</td>
<td>Supported</td>
<td>0.215</td>
<td>0.298</td>
</tr>
<tr>
<td>H3b</td>
<td>(EN) &gt; CS</td>
<td>0.319</td>
<td>8.055</td>
<td>0.000</td>
<td>Supported</td>
<td>0.257</td>
<td>0.384</td>
</tr>
<tr>
<td>H4a</td>
<td>(SO) &gt; CR</td>
<td>-0.061</td>
<td>2.132</td>
<td>0.033</td>
<td>Supported</td>
<td>-0.115</td>
<td>-0.018</td>
</tr>
<tr>
<td>H4b</td>
<td>(SO) &gt; CS</td>
<td>0.469</td>
<td>11.130</td>
<td>0.000</td>
<td>Supported</td>
<td>0.537</td>
<td>-0.398</td>
</tr>
</tbody>
</table>

Source: Fieldwork, 2023

### Table 6b: Structural model hypothesis testing for specific indirect effect on sustainable practices

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Constructs</th>
<th>Std. Beta</th>
<th>(t-values)</th>
<th>P Values</th>
<th>Decision</th>
<th>5% CI L</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>SO &gt; CS &gt; CR</td>
<td>0.333</td>
<td>10.457</td>
<td>0.000</td>
<td>Supported</td>
<td>-0.378</td>
<td>-0.276</td>
</tr>
<tr>
<td>H2a</td>
<td>EC &gt; CS &gt; CR</td>
<td>0.162</td>
<td>6.672</td>
<td>0.000</td>
<td>Supported</td>
<td>0.127</td>
<td>0.208</td>
</tr>
<tr>
<td>H2b</td>
<td>(EC) &gt; CS</td>
<td>0.226</td>
<td>7.768</td>
<td>0.000</td>
<td>Supported</td>
<td>0.180</td>
<td>0.276</td>
</tr>
</tbody>
</table>

Source: Fieldwork, 2023

### 5 DISCUSSION

The study assessed the impact of sustainable practices of hospitality supply chain on customer satisfaction and their repurchases of hospitality services. Through the investigation of the three dimensions of sustainability practices impact on customer satisfaction and customer repurchase of hospitality services, the study has made some critical theoretical contributions to the area of hospitality. These theoretical contributions are critical because most studies focused on one sided dimensional approach of...
sustainability and focus on one service provided by hospitality firm, but the extent of this study covers the three-dimensional approach and consider a broad range of services provided by the hospitality firms. The findings reported in the study provides more information that advances the existing knowledge in the sustainable supply chain in hospitality sectors. The specific findings suggest that as firms resort to the use of their supply chain as competitive weapons rather than individual company level, it is apparent to inculcate sustainable practices that appease customers because of the protection of the environment and it prospects of enhancing business continuity. The findings informs that some sustainable dimension provides positive and significant impact on customer satisfaction and customer repurchase of hospitality services which conforms to previous studies.

Although all three dimensions of sustainability was assessed on customer satisfaction. The finding suggests that the environment dimension (H3b: β3b = 0.319, P value = 0.000) and economic dimension (H2b: β2b = 0.228, P value = 0.000) as well as social dimension (H4b: β4b = 0.469, P value = 0.000) of sustainability positively and significantly influence customer satisfaction which conforms to previous studies that suggest that customer satisfaction in the hospitality sector is influenced by sustainable dimensions (Modica et al., 2018).

The findings revealed in this study suggest that customer satisfaction (H1: β1 = 0.709, P value = 0.000) positively and significantly influence customer repurchase of hospitality services, which is widely held in previous studies that customer satisfaction impact positively on customer repurchase intentions of hospitality services ((Kim et al., 2012; Majeed et al., 2022)), but it is noticed that not all sustainable dimension that influence customer satisfaction will directly influence customer repurchase of hospitality services. The findings indicate that economic dimension (H2a: β2a = -0.011, P value = 0.288) and social dimension (H4a: β4a = -0.061, P value = 0.033) indirectly influence customer repurchase of hospitality services through customer satisfaction. This finding concurs with the study of Xu and Gursoy (2015b) which suggest that customer satisfaction mediates the relationship between the sustainable dimension and customer loyalty in purchasing hospitality services. However, the environment dimension (H3a: β3a = 0.254, P value = 0.000) directly and significantly influence customer repurchase of hospitality services. This findings therefore invariably differ from past studies that that held with the position that customer satisfaction mediates the relationship in sustainability.
dimensions and customer loyalty to repurchase hospitality services (Xu & Gursoy, 2015b; Modica et al., 2018)

6 CONCLUSION AND LIMITATION TO STUDY

This study assessed the impact of sustainable hospitality supply chain practices on customer satisfaction and the behavior pattern on whether or not that influences customers repurchase of hospitality services utilizing data obtained from customers of hospitality firms in Ghana that purchase (accommodation services, restaurant services and conference hosting) provided by the hospitality sector. Intriguing conclusion emerges that informs existing body of knowledge on the sustainability of the hospitality sector supply chain management. It is indicative that environmental dimension sustainable supply chain provides direct positive significant impact on customer satisfaction and customer repurchase of hospitality services. It is also noticed that the economic and social dimension of sustainable hospitality supply chain provides direct significant impact on customer satisfaction but an indirect impact on customers repurchases of hospitality services through customer satisfaction. This indicates that there is varying degree of satisfaction of sustainable dimensions among customers of hospitality firms. It is therefore important for firms to aligned or realigned their limited resources to these dimensions to achieve higher level of satisfaction. It is also noticed that customer satisfaction of sustainable hospitality supply chain practices highly influences customers repurchase of hospitality services. The practice of all three dimension of sustainable hospitality supply chain highly increased customer satisfaction and this influence customer repurchases of hospitality services. evidence suggest that combined sustainable supply chain improves repurchase of hospitality services through customer satisfaction. it is therefore critical for firms to adopt and practice all the three sustainable dimension to improve their financial strength and enhance business continuity.

This paper is construed only to the four variables identified in the study and sort to use quantitative method through the application of questionnaire to obtain primary data. Despite this limitation, this study makes significant contribution to research and practice which provides relevant options to induce further research. Firstly, future researchers can consider other forms of research method such as the qualitative research or the mixed research. This provide a basis for the findings to be compared to what has been established in this study.
6.1 THEORETICAL IMPLICATION

The three dimension of sustainability (economic, environment, social) and hospitality supply chain are emerging as significant research area in service consumer research. This study adds to the hospitality supply chain by examining how the three sustainability dimension influences customer repurchases of hospitality services. Previous studies have looked into the three sustainability practices influence on customers willingness to pay premium (Modica et al., 2018; Xu & Gursoy, 2015b). This study delves onto sustainable practices influence on customers repurchase of the services of the hospitality sector. This study is novel and through which we learned that some sustainable dimension may not be equally relevant to all circumstances. With the growing demand for sustainability practice in the hospitality sector, it is only significant to determine which sustainable practice will have significant impact on the customers and their willingness to repurchase the hospitality service. This study adds to the body of knowledge on customer satisfaction and customer repurchase of hospitality services. According to our findings, environment, social and economic dimensions of sustainability has direct significant influence on customer satisfaction and provides an indirect influence on customers repurchase of hospital services except the environmental dimension of sustainability. This study supports the use of sustainable supply chain as means or driver to enhance the financial and economic growth of the organization through developing and implementing the sustainable practices to promote customer satisfaction and enhanced their commitment to repurchase the services provided by the hospitality firms (Graham & Bansal, 2007). The findings reveal further revealed that customer satisfaction influence customer repurchase of hospitality service. This therefore support the assertion that sustainability can be used as a tool to win customers for business growth because customers in the hospitality firms were conscious of the sustainability practices in this firms and these influence their decision to repurchase the services of the firms.

6.2 MANAGERIAL IMPLICATION

This study delves into the sustainable dimensions as motivator for customer satisfaction and customer repurchase of hospitality sector services. The study findings revealed that all sustainability actions in the supply chain directly influence customer satisfaction, which ultimately leads to customer repurchase of hospitality services. From the managerial standpoint, this study proposes that among other strategies such as
enhancing product and service quality, hospitality businesses should implement sustainable hospitality supply chain management in order to improve customers’ satisfaction, and to enhance company’s performance (Modica et al., 2018). The findings suggest that actions related to each dimension of sustainable hospitality supply chain are not likely to have the same effect on customer satisfaction, and the repurchase of hospitality services. Therefore, hospitality businesses may need to prioritize the sustainability actions based on their expected impacts on customer future intentions and behaviors. Businesses may need to invest more resources in its environmental-friendly actions and try to enhance its financial performance through improving the efficiency of their operating mechanism since these can have significant impact on customer satisfaction, and the repurchase of the hospitality services. Though hospitality firms are likely to derives higher benefit from the practice of sustainability, most of the sustainability practices are practiced due to regulatory requirement (Xu & Gursoy, 2015a). Firms in the hospitality sector should realize that although sustainability practices may be considered costly for supply chain operations in the short term, but in the long term, companies will gain the needed benefit from the adoption and practice of sustainable hospitality supply chain operation since the practice can lead to better performance of the hospitality sector management through customer satisfaction and customer repurchase of services provided by the hospitality firms (Modica et al., 2018). Another significant sustainability that deserves improvement is the social dimension. Improve sustainability practice in this dimension propels organization growth and increase community development. Hospitality firms must take critical look at this aspect and improve the activities of their social dimension of sustainability to obtained the desire benefits.
REFERENCES


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