

# THE IMPACT OF SUSTAINABLE HOSPITALITY SUPPLY CHAIN ON CUSTOMER SATISFACTION AND CUSTOMER LOYALTY

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## Abstract

*The efforts of only hotels cannot achieve sustainability in Hospitality; it requires a long-term collaboration among all the stakeholders involved in a Hospitality Supply Chain. The current research aims to study the impact of the environmental, social, and economic dimensions on Customer Satisfaction & Customer Loyalty utilizing data collected from Indian tourists. We have based the current research on Questionnaire surveys. Regression Models using SPSS are applied to test the Model Hypothesis. Findings suggest that sustainable hospitality supply chain management's environmental dimension, social dimension, and economic dimension positively influence customer satisfaction & also, there is a positive influence of Customer Satisfaction on Customer Loyalty.*

**Keywords:** *Sustainability, Hospitality Supply Chain Management, Environmental Dimensions, Social Dimensions, Economic Dimensions, Customer Satisfaction, Customer Loyalty*

## Introduction

The hospitality supply chain involves suppliers, retailers and customers of the entire hospitality goods & services (Xu & Gursoy, 2015). Many companies have adopted environmental initiatives, triple bottom line, & environment-

friendly waste management into their overall company strategy (Hsu et al., 2013; Bacallan, 2000; Rao & Kondo, 2010). Managers and Research scholars are giving a lot of importance to Sustainable Hospitality because of the close attention of guests & travelers (Berezan et al., 2013). Sustainable supply chain Management initiatives have helped the Hospitality business to achieve environmental performance (Rao, 2002, Bacallan, 2000), economic performance, and competitiveness (Sharma et al., 2015; Rao & Holt, 2005). Very little research is available on sustainable supply chain contribution toward achieving better performance in the service industry. However, there is tremendous relevance in incorporating sustainability in the supply chain process of the service industry (Kamal & Fernando, 2015). Walker et al. (2014) consider sustainable Operations Management as the implementation of social, economic, and environmental objectives into the operations of an individual firm and operational linkages that go beyond the firm to include the supply chain and communities. Earlier studies have focused on Environmental factors (Rahman et al., 2012). However, understanding sustainable Hospitality practices require a framework of environmental, social, and economic dimensions. A comprehensive review of the three dimensions for hospitality in the Indian context is not available. This study focuses on the Impact of a Sustainable Hospitality Supply Chain on Customer Satisfaction and Customer Loyalty for Indian Tourist.

## Literature Review

Hotel activities are highly inter-related with other businesses, which provides a unique opportunity to encourage their partners to help them attain their environmental mission (Lakshmi, 2002). The core characteristic of the Supply Chain is the integration and coordination of processes along the supply chain to create customer values (Kannan & Tan, 2005). Hotels need to synergize with upstream suppliers (suppliers of food & beverage, culinary materials, laundering linen, etc.) and downstream partners (customers). The supply chain delivers both products & services from Vendor's Vendor to the Customers (Kothari et al., 2005). Hospitality services offer a combination of tangible (food) and intangible elements (the experience), and therefore the interaction between customers and employees is essential.

Sustainable Hospitality Supply Chain Management has three Dimensions: The environmental sustainability dimension works towards reducing the negative impact of the environment due to Supply Chain Operators (Hassini et al., 2012). The social dimension focuses on the social welfare of employees,

customers, suppliers & other stakeholders in the supply chain (Gopalakrishnan et al., 2012). The economic dimension generates higher profits & market share (Kleindorfer et al., 2005). Sustainable business practices improve a business's reputation and positively influence customer satisfaction (Han et al., 2011). Xu and Gursoy (2015) proposed a conceptual framework for the hospitality supply chain, customer satisfaction & customer loyalty. Various Rs (Reduce, Re-use, Rework, Refurbish, Reclaim, Recycle, Remanufacture, Reverse logistics, etc.) facilitate the implementation of the Sustainable Hospitality Supply Chain Management practices. Hospitality Supply Chains are bidirectional wherein customers are also suppliers of constructive feedback on service specifications.

Customer Satisfaction evaluates Customer experience regarding their expectations (Aurier & Evrard, 1998). Environmental dimensions positively influence customer satisfaction (Berezan et al., 2013). It has always been under pressure to become environmentally friendly (Cetinel & Yolal, 2009). Hotels green practices influence customer satisfaction (Berezan et al., 2013). Socially responsible actions like employees' welfare influence customer satisfaction (Costen & Salazar, 2011). Employee health & safety enhancement increases Customer Satisfaction (Chi & Gursoy, 2009). Long-term relationships & socially responsible action also improves Customer Satisfaction (Closs et al., 2011). The involvement of the local community enhances customers' satisfaction (Holmes & Yan, 2012). The social dimension actions enhance hospitality reputation & brand image (Lee & Heo, 2009). The economic dimension influences customers' satisfaction (Lo et al., 2015). Good financial performance increases customer satisfaction (Jung & Yoon, 2013).

We can define Customer loyalty as behavioral measures expressed over time or repurchase habits (Bloemer & Kasper, 1995). It is the customers' commitment to the company's product, service & brand (Oliver, 1999). This positive link exists in the hospitality context. Studies prove that increased customer satisfaction positively affects tourists' loyalty (Loureiro & Kastenzholz, 2011). Customer satisfaction is the precursor of loyalty (Gursoy et al., 2014). The constructive link of customers' satisfaction & loyalty in hospitality has been vital in the past (Kim et al., 2013).

## **Current Research**

The following are the Research Questions (Fig. 1 shows the path diagram of the theoretical model):

- Is there a positive & significant relationship between the environmental dimensions of sustainable hospitality supply chain management and customer satisfaction?
- Is there a positive & significant relationship between the social dimensions of sustainable hospitality supply chain management and customer satisfaction?
- Is there a positive & significant relationship between the economic dimensions of sustainable hospitality supply chain management and customer satisfaction?
- Is there a positive & significant relationship between customer satisfaction and customer loyalty?

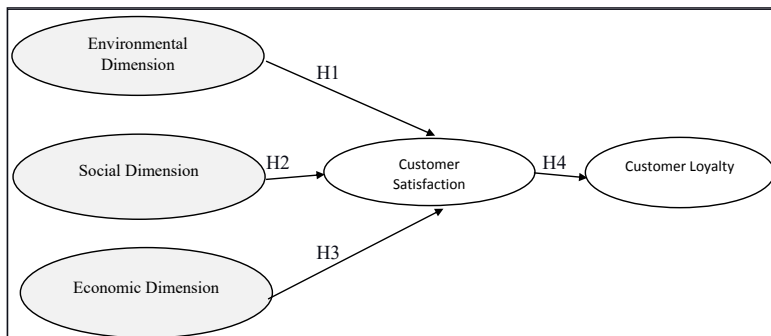
In Regression Model 1, Customer Satisfaction is considered as latent-dependent (exogenous) variables & Environment, Social & Economic dimensions are considered as a latent-independent (endogenous) variable. In regression Model 2, Customer Loyalty is considered as latent-dependent (exogenous) variables & Customer Satisfaction is considered as a latent-independent (endogenous) variable. If we view an endogenous variable as both a dependent and independent variable, the variable is affected by others and affects other variables. Customer Satisfaction is affected by Environment, Social & Economic dimensions, and it impacts Customer Loyalty so that we view Customer Satisfaction as a mediator.

## Research Hypothesis

Based on the research literature & research questions, the study has framed the following hypothesis.

- *Hypothesis 1:* The environmental dimensions of sustainable hospitality supply chain management positively impact customer satisfaction.
- *Hypothesis 2:* The social dimensions of sustainable hospitality supply chain management positively impact customer satisfaction.
- *Hypothesis 3:* The economic dimensions of sustainable hospitality supply chain management positively impact customer satisfaction.
- *Hypothesis 4:* Customer satisfaction positively impacts customer loyalty.

We label each path in Fig. 1 with its associated hypothesis:



**Fig. 1: The Influence of Sustainable Hospitality Supply Chain Management on Customer Satisfaction & Customer Loyalty**

## Latent and Measurement Variables

In the current research, based on literature survey & consulting hotel experts to adapt to the hotel environment (Xu & Gursoy's, 2015), we define the following measurement variables for the latent variables Environmental Dimensions, Social Dimensions, Economic Dimensions, Customer Satisfaction & Customer Loyalty:

### *Environmental Dimensions*

- Green service process
- Recycling
- Pollution control
- Environment management systems

### *Social Dimensions*

- Employees benefits
- Customers community
- Suppliers involvement
- Government compliances

### *Economic Dimensions*

- Revenue growth

- Profit growth
- Cost control
- Market share growth

#### *Customer Satisfaction*

- Staying pleasure
- Hotel service choice
- Value for money
- Ambient comfort

#### *Customer Loyalty*

- Recommend
- Positive endorsements
- Prefer this hotel
- Inspire others

We measure each item in the five sections on a 7-point Likert-type scale (1=strongly disagree, 7=strongly agree).

## **Research Methodology**

The study uses a questionnaire survey and an interviewing method to collect data & test the proposed hypotheses. The measurement model involves the reliability and validity of the constructs, while the structural model relates to the direct and indirect relationships among the latent variables. The study chose All - Indian Hotels & Tourist destinations using self-administered instruments. We distributed Questionnaires (in the form of an e-mail) through executive education participants studying at the School of Business Management, NMIMS University, who have traveled for leisure in the last five years. Respondents were identified amongst regular users using Convenience Sampling. Due to high levels of missing data (exceeding 8%), the study eliminated some of the responses that were incomplete and inadequate. The study uses Seven Hundred & Fifty-Four valid responses for analysis. The respondents demographic comprises 64 percent male and 36 percent female, all traveling for holiday & leisure. The age distribution was: up to 40 years (43%) and 41-60 years (38%) and the remaining above 60 years. Education of the respondents: graduate degree or more minor (63%), Postgraduate (32%) & the remaining had professional degrees.

### **Construct Validity and Reliability Assessment**

Reliability Testing was employed using Cronbach alpha. The table shows that Cronbach’s alpha value exceeds the cut-off value.

**Table 1: Scale Reliability**

<b>Latent Variable</b>	<b>Cronbach’s Alpha</b>
Environmental Dimensions - ED	0.689
Social Dimensions - SD	0.722
Economic Dimensions - EC	0.691
Customer Satisfaction - CS	0.690
Customer loyalty - CL	0.676

**Table 2: Validation of Scale**

<b>Latent Variable</b>	<b>Loading Range Component Matrix</b>	<b>ESSL % Variance</b>
Environmental Dimensions - ED	0.591-0.746	44.8
Social Dimensions - SD	0.724-0.752	54.5
Economic Dimensions - EC	0.48-0.762	45.6
Customer Satisfaction - CS	0.699-0.735	51.80
Customer loyalty - CL	0.592-0.770	51.55

The general comment of the respondents was that the scale had a good construct & content.

### **Model Fitting and Hypotheses Testing**

*Variables*

- Environmental Dimensions - ED
- Social Dimensions - SD
- Economic Dimensions - EC
- Customer Satisfaction - CS
- Customer loyalty - CL

The study tested for the following two equations:

*Equation 1:* Regression of Customer Satisfaction on Environment, Social & Economic Dimension.

$$CS = \beta_{11} + \beta_{21} * ED + \beta_{31} * SD + \beta_{41} * EC$$

SPSS Output Summary

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.427 <sup>a</sup>	.182	.179	.92265

a. Predictors: (Constant), EC, ED, SD

**Anova<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	142.157	3	47.386	55.663	.000 <sup>b</sup>
	Residual	638.468	750	.851		
	Total	780.625	753			

a. Dependent Variable: CS

b. Predictors: (Constant), EC, ED, SD

**Coefficients<sup>a</sup>**

Model	B	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		Std. Error	Beta			
1	(Constant)	4.365	.234		18.644	.000
	ED	.218	.043	.187	5.072	.000
	SD	.094	.037	.104	2.536	.011
	EC	.464	.039	.457	12.053	.000

a. Dependent Variable: CS

*Equation 2:* Regression of Customer Loyalty on Customer Satisfaction.

$$CL = \beta_{12} + \beta_{22} * CS$$



SPSS Output Summary

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.499 <sup>a</sup>	.249	.248	.75250

a. Predictors: (Constant), CS

**Anova<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	140.829	1	140.829	248.700	.000 <sup>b</sup>
	Residual	425.829	752	.566		
	Total	566.658	753			

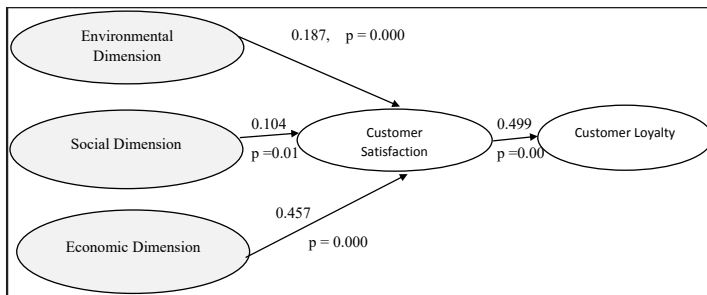
a. Dependent Variable: CL

b. Predictors: (Constant), CS

**Coefficients<sup>a</sup>**

Model	B	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		Std. Error	Beta			
1	(Constant)	3.384	.135		25.113	.000
	CS	.425	.027	.499	15.770	.000

a. Dependent Variable: CL



**Fig. 2: The Influence of Sustainable Hospitality Supply Chain Management on Customer Satisfaction & Customer Loyalty**

## ***Results and Inferences***

Based on the SPSS Regression outputs, the study infers the following:

Equation 1: Regression of Customer Satisfaction on Environment, Social & Economic Dimension.

$$CS = \beta_{11} + \beta_{21} * ED + \beta_{31} * SD + \beta_{41} * EC$$

*Hypothesis 1:* The environmental dimensions of sustainable hospitality supply chain management positively impact customer satisfaction.

*Hypothesis 2:* The social dimensions of sustainable hospitality supply chain management positively impact customer satisfaction.

*Hypothesis 3:* The economic dimensions of sustainable hospitality supply chain management positively impact customer satisfaction.

Equation 2: Regression of Customer Loyalty on Customer Satisfaction.

$$CL = \beta_{12} + \beta_{22} * CS$$

*Hypothesis 4:* The Customer satisfaction positively impacts customer loyalty.

## **Implications of the Study**

The regression coefficients between the environmental, social, and economic dimensions and customer satisfaction are significant and positive, indicating that consumers are likely to be satisfied if hotels and their suppliers implement sustainable hospitality practices. The results confirm previous studies' findings that hospitality business environmental-friendly actions enhance customer satisfaction (Berezan et al., 2013). The social dimension positively impacts customer satisfaction, which is consistent with the findings of previous studies (e.g. Lee & Heo, 2009). Similarly, the regression coefficients between customer satisfaction and loyalty are significant & positive. The results indicate that customer satisfaction can increase loyalty. 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 improve company's Loyalty. Even though sustainability actions are likely to generate significant benefits for hospitality companies, we implement some of these sustainability actions because of the regulatory enforcement. Hospitality

sustainability actions are costly for supply chain operations in the short term. However, companies are likely to benefit from sustainability practices in the supply chain operations in the long run because these practices can lead to better performance for the hospitality business through enhanced customer satisfaction and loyalty. In the long term, sustainability actions are likely to generate both internal benefits for hospitality companies and external uses for society.

## **Conclusions of the Study**

This study discusses the whole hospitality supply chain's sustainability actions instead of individual companies'. The results clearly show that hospitality companies and their suppliers' sustainability actions strongly influence customers' satisfaction. This study identifies and compares the influences of each of the three dimensions on customers' satisfaction. Findings suggest that activities related to each dimension of sustainable hospitality supply chain are not likely to have the same effect on customer satisfaction and loyalty. Therefore, hospitality businesses may need to prioritize the sustainability actions based on their expected impacts on customers' future intentions and behaviors. Sustainable Hospitality includes product/service quality produced in the hotel and its supplier and supply chain reliability and flexibility.

Sustainability practices integrated into the whole supply chain can generate significantly more positive effects than those obtained from sustainability actions implemented by only an individual business such as a particular hotel (Ashby et al., 2012). We should execute Sustainability actions such as green products and services design from the upstream of the supply chain (upstream suppliers) (Wang et al., 2013). This approach can bring a significant competitive advantage for the whole supply chain and benefits all stakeholders in the supply chain. Long-term partnership and information sharing may be among the more efficient ways to coordinate stakeholders and maximize the profits for the whole supply chain. Cooperation is a must in achieving sustainability goals. All businesses in the supply chain must understand the importance of profit maximization for the entire hospitality supply chain. Individual business' profit maximization for the success of sustainability initiatives should be discouraged.

## **Limitations and Scope for Future Research**

The current study contributes significantly to Academia. However, it has limitations. Sustainable Hospitality Supply Chain Practices are influenced by

the type of Hotel as classified by star rating, the culture of the local community, etc. (Han et al., 2011). Customer behavior can also influence these practices. The current study does not account for these variations & this provides the opportunity for future research on specific categories of Hotels in different locations.

Another structural limitation of this type of study is defining the latent factors. We have used the existing literature survey to describe the Environmental dimension, Social dimension, Economic dimension, Customer satisfaction & Customer loyalty. The labels could have been called differently with different measurement variables. Also, since our Model assumes a singular path between environment, social & economic dimensions, customer satisfaction & customer loyalty, a regression model was adequate. However, we could use alternate models like structural equation models for establishing both path & measurements & the results could be different.

Although sustainable hospitality supply chain management can bring tremendous benefits to hospitality businesses, we cannot ignore the costs. This study mainly discusses its positive influences but does not provide an optimal solution of how many actions should be taken by the members of a sustainable hospitality supply chain management considering the tradeoff between its benefits and operational costs. This can be a topic of interest for future research in the hospitality domain.

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