

The Effect of Physical Environment's Innovativeness on the Relationship between Hosting Quality and Satisfaction in Hotel Services

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Abstract—The aim of this paper is to examine the moderating effect of physical environment's innovativeness (PEI) on the relationship between hosting quality and satisfaction in the hotel services. This preliminary study, involving 392 hotel guests in Malaysia, employed questionnaire survey as the main method of data collection. Hierarchical moderated regression analysis performed found statistical supports for the positive influence of hotel hosting quality on guest satisfaction as well as positive moderating effect of PEI.

Index Terms—Customer Satisfaction, hotel hosting quality, hotel marketing, physical environment.

I. INTRODUCTION

The primary objective of hospitality hosting quality is to offer entertaining experience to the guests while its ultimate aim is to create memorable experience [1]. According to [2], hospitableness of the service rendered by the contact staffs determine the competitive advantage or unique selling proposition of the hospitality firms. Hospitality treatment is undeniably hard to be copied, challenged or offered in an effective fashion by the competitors. In this study, hospitality is conceptualized as the hosting behaviour that emphasizes on hospitability of the host-guest interpersonal relationship with the ultimate aim to create memorable service experience [3], [4].

Reference [5] argued that besides the hospitality treatment by host, the atmosphere created by the setting or physical environment provides emotional dimensions to the service experience which are very crucial to creating memorable experience. However, according to [1], it is the quality of the service treatment by the contact staffs not the tangible elements of the service which generates emotional experience that impacts upon the long-term customer satisfaction and loyalty. In the context of this study, the tangible elements of the hotels are considered as "dissatisfiers". Guests will be frustrated if it does not meet their expectations, but exceeding their expectations will not generate satisfaction or impress the guests either [6]. Based on the above arguments, in this study, rather than being merely the main independent variable, the hotel's physical environment was instead treated as the moderating variable that may influence the main effect of hospitality on guest satisfaction. It is anticipated in this study that the influence of

hosting quality on guest satisfaction would be stronger if the hotel offers impressive service environment. Impressive in this study is conceptualized as innovative.

Review of literature showed that hospitality hosting quality has positive effects on customer satisfaction [7], [4], [2]. This present study attempts to provide empirical evidence on the effect of the interactional term between hosting quality and innovativeness of physical environment on guest satisfaction for hotel services. This is the core issue that this present study attempts to address. Based on this issue, the specific objectives of this study are two-fold:

- 1) to determine the effect of hospitableness of hosting behaviour on guest satisfaction in the context of hotel services, and
- 2) to examine the moderating effect of the innovativeness of hotel's physical environment on the predicted relationship between hosting quality and guest satisfaction

II. LITERATURE REVIEW

A. Hospitality Hosting Quality

Hospitality is essentially based on the host and guest relationship [8]. Reference [9] described hospitality as a process that includes arrival, which involves greeting and making the guests feel welcome, provide comfort and the fulfilment of the guest's wishes, and departure which includes thanking and an invitation to return. Hospitality is treated as the "enhanced service" focusing on the style and attitude in which the service is performed (Smith 1994).

Reference [4] proposed a five-factor structure to explain the dimensionality of hospitality specifically in the context of hotel services. Personalization was the most important factor followed by warm welcoming, special relationship, straight from the heart and comfort. Good service is often regarded as more personalized service [10]. Warm welcoming is unquestionably the most apparent aspect of hospitality. The need for the hotel employees to understand and subsequently meet all the special requests from their guests is captured by the third dimension labelled as "special relationship". Apart from the aspects of host-guest relationship, generosity, and safety/security, hospitality is also characterized as possessing "lots of little surprises" by [11]. The concept of hospitality should originate naturally from the heart of the host and reflected in their behaviour and words. "Comfort" was the fifth factor which refers not only to the comfort of the guest room but also the guest's emotional state including safety and security throughout their stay at the hotels.

Manuscript received July 24, 2012; revised August 26, 2012.

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The core concept of hospitality focusses on the emotional aspect rather than the functional aspect of the service provisions. Although hospitality is composed of a mixture of tangible and intangible elements [12], [13], reference [4], and [3] as well as many other hospitality scholars have convincingly argued that the host-guest interpersonal relationship is the core differentiating factor between hospitality and service. Even though the emotions of the guests are also partly influenced by tangible elements of the service offerings such as the layout, exterior and interior decoration of the service hall, hospitality emphasizes on the emotional dimensions resulted from the interpersonal host-guests relationship.

The roles played by the tangible elements including the physical environment should not be ignored in the efforts to obtain substantially high total satisfaction. According to [14] the act of being hospitable, through increased attentive social interactions with guest, together with improved guest amenities is postulated to increase a guest's mental and physical well-being while advocating total quality customer care.

B. Guest Satisfaction

Reference [15] defined tourist satisfaction as a psychological concept that involves the feeling of well-being and pleasure that results from obtaining what one hopes for and expects from an appealing product and/or service. Reference [16] described the concept as consumer's fulfilment response. Customer satisfaction is a judgement that a product or service features, or the product or service itself, provides (or is providing) a pleasurable level of consumption-related fulfilment, including levels of under or over-fulfilment. These definitions showed that pleasurable level of the fulfilment response is essential to the concept of satisfaction. The concepts of pleasurable or enjoyable are reflected in the measurement of customer satisfaction employed by many researchers including [17] and [18] which was adopted in this present study.

The affective nature of satisfaction as encapsulated in [16] and [15] definitions which explores the roles and meaning of emotions in satisfaction is argued to be the more relevant paradigm for the hospitality industry. In the context of service, the evaluation of overall guest satisfaction is mainly determined by the cumulative customers' sub-judgment for each of single service encounters during the whole service experiences [19]. This cumulative sub-judgment is then compared with the prior expectation level. The Expectancy-Disconfirmation Theory proposed by [20] posited that customers assess their satisfaction levels by comparing their actual experiences or performances with their expectation.

Review of literature showed that the guests' satisfaction in the hotel services was primarily influenced by how their needs, wants and requirements are fulfilled by the tangible as well as intangible elements of the service offerings [21], [22], and [23]. The blend of factors comprising the three marketing mix elements of service marketing including hotel staffs, hotel physical environments, as well as the service process are all playing important roles in creating a satisfying

and memorable hotel experiences [2], [4].

C. Physical Environment

Review of literature showed that physical environment has strong influences on the level of customer satisfaction [24], [25]. Reference [26] explain that the service environment where interaction between customers and employees includes all tangible elements that facilitate the process of discharging the services.

Reference [27] proposed DINESCAPE as the scale of physical environment for the dining area of upscale restaurants that includes six dimensions: facility aesthetics, lighting, ambience, layout, table settings and services staff. Facility aesthetics means architectural design, interior design and décor that contribute to the attractiveness of the dining environment restaurants [28]. Other aspects of interior design, including furniture, pictures/painting, plants/flowers, or wall decorations may serve to intensify the perceived quality of the environments, eliciting emotions and influencing the behavior of a customer.

Previous studies have shown that facility aesthetics can influence customer responses, such as attitudes, emotions, perceptions, satisfaction as well as behavior [29], [30], [27]. A symbolic meaning and aesthetic impression can be communicated through artwork, certificates, floor coverings and personal items. Ambient covers elements such as lighting and color, sounds, temperature as well as scents or smells. Research discovers that there is a correlation between the lighting levels and individuals' emotional responses and approach-avoidance behaviors. Color combinations affect perceptions and attitudes, and may even cause certain behavioral differences [31]. Atmospheric music was found to affect the customer perceptions of business places [32], customer satisfaction and relaxation [33] and purchase intentions [34].

The spatial layout encompasses machinery, equipment and arrangement, size and shape of furnishings, and also their arrangement. Functionality relates to the ability of using those items to facilitate the achievement by customer and employee goals [35]. Visual and functional environment for delivery and consumptions are enabled through the spatial layout and functionality. These factors determine the efficiency of the services operation, user-friendliness and shape the customer experience [36]. Furnishings in a servicescape link the space with its occupants and convey the personality of the servicescape through the form, line, colour, texture, and scale.

The arrangement of furniture can also convey a sense of enclosure, define spatial movement, function as walls, and communicate visible or invisible boundaries. These elements assist individuals to form a mental picture in their minds prior to affective response and judgments toward a specific physical environment.

III. RESEARCH FRAMEWORK AND HYPOTHESES

The conceptual framework employed for this present study is as presented in Figure 2. Hotel guest satisfaction is the dependent variable in the model while hospitableness of hosting behaviour is the independent variable. The physical

environment’s innovativeness is the moderating variable.

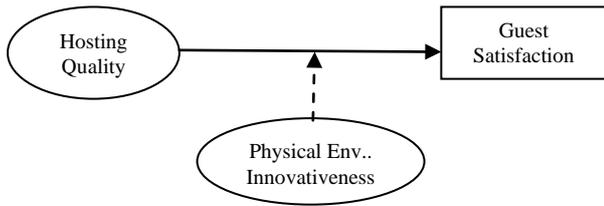


Fig. 2. Conceptual framework

Reference [37] contended that the aspect of physical environment is playing an important role particularly for hedonic services. Teng (2011) argued that a true hospitality experience can increase customer satisfaction particularly for hospitality organizations such as the hotel industry. Past studies focused on hotel services such as by [2] and [4] that indicated that hospitality hosting behaviour has a direct positive impact on guest satisfaction.

The attractiveness of the physical environment setting has been recognized as one of the most fundamental aspects in attracting as well as delighting service customers [38], [29], [39], [30]. The aim of marketing in the context of hospitality services (such as hotels, airlines, restaurants) is to create a memorable experience for their guests. According to [1], apart from the hospitableness of the contact staffs-customers interaction, the atmosphere of the service environment is also playing an important function in creating memorable experience. However, the difference between the two factors is that the tangible elements is merely considered as “dissatisfiers” where guests will be frustrated if they do not meet their expectations, but exceeding their expectations will not produce satisfaction or impress the guests either [6]. Based on the above arguments, it is hypothesized in this study that:

- H1: Hospitableness of hosting behaviour has a positive effect on hotel guest’s level of satisfaction.
- H2: The innovativeness of the hotel’s physical environment strengthened the predicted relationship between hosting quality and guest satisfaction.

IV. RESEARCH METHOD

Questionnaire survey was employed as the main method of data collection. The samples of this study were obtained using judgmental sampling technique as the main aim of this study was more toward theoretical rather than population generalization [4]. The population of this study was defined as hotel guests who have experienced staying at least two nights in Malaysian hotels located in the city of Kuala Lumpur for leisure purposes within the last five months. The data were collected via central location intercept across multiple tourist attractions as well as main shopping malls in the Kuala Lumpur city at various times of the day. Reference [40] suggested a sample size of within 200 to 500 for studies that involve none or few subgroups. Reference [41] proposed that a sample size of at least 200 respondents is required to perform modelling of moderate complexity. Based on the above, the targeted sample size for this study was 500.

Hierarchical moderated regression was conducted to test

all the hypotheses. All scales were averaged to form a composite score. To examine the moderating effect of physical environment, the data were mean-centred to avoid the problem of multicollinearity when multiplying the moderator by hotel hosting quality.

A. Measurements

A four-item scale fully adopted from the well-established scale developed by [17] was used to measure satisfaction in this study. This scale, as presented in Table 1 has been employed by many researchers in hotel services including study conducted by [18]. All items were measured using a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree).

TABLE I: GUEST SATISFACTION SCALE

No.	Items
1	I am satisfied with my decision to visit this hotel/motel
2	My choice to stay at this hotel was a wise one
3	I think I did the right thing when I chose to stay in this hotel
4	I feel that my experience with this hotel has been enjoyable

The HotHos scale developed by [4] was adapted to measure hotel hosting quality. The scale consisted 22 items and measured on a five-point scale from 1 (strongly disagree) to 5 (strongly agree). Samples of the item were presented in Table II.

TABLE II: HOTEL HOSTING QUALITY SCALE

No.	Items
1	Given a warm welcome at the door step
2	Presented with an unexpected welcoming token or gift
3	Walked to the hotel room by the staff upon check in
4	Given warm “good bye” after checking out at the counter
5	Felt as if I was at home while staying at the hotel
6	The hotel staff gave me authentic smiles all the time
7	The hotel staff made eye contact with me during conversations
8	The hotel staff treated me with full respect

The scale used to measure innovativeness of physical environment was newly developed for this study. The main reference used to generate the initial pool of items was [42]. In-depth personal interviews were then conducted with five frequent hotel guests and five hotel’s general managers to develop items which were specific to innovativeness of physical environments in the context of hotel services. 15 items were generated from these two sources and finalized scale, after all the required screening and purification processes consist of only seven items. The Cronbach’s alpha for the scale was 0.92. Respondents were required to rate the 13 items on a five-point scale from 1 (strongly disagree) to 5 (strongly agree). The full measurement for the variable is presented in Table III.

TABLE III: INNOVATIVENESS OF PHYSICAL ENVIRONMENT SCALE

No.	Items
1	The wall of the hotel are decorated innovatively
2	The combination of colours used in the hotel is different from other hotels
3	The exterior of the hotel is distinctively designed
4	In its overall, the interior of the hotel is designed innovatively
5	The furniture used by the hotel is unique
6	The lobby of the hotel is designed innovatively
7	The lighting of the hotel is different from other hotels
	The background music of the hotel is different from other hotels

TABLE IV: RELIABILITY ANALYSIS

Variables	Number of Items	Alphas	Cronbach's Alphas
Hosting quality	22	0.94	0.93
Guest satisfaction	4	0.96	0.87
Physical Environ.	7	0.92	0.91

V. RESEARCH FINDINGS AND DISCUSSION

At the end of two months of data collection period, a total of 500 questionnaires have been distributed. Out of these, only 304 questionnaires (60% response rate) were found to be useful for further analysis. The balance was discarded mainly due to the large number of missing values and inconsistency in the response pattern.

A. Reliability Test

The result indicated that the values of Cronbach's alphas for all the three variables in this study ranged from 0.92 to 0.96. These figures as presented in Table 4 exceeded the cut-off point of 0.70 as suggested by [43] and [44] for the theory testing purposes.

B. Correlational Analysis

Correlation provides an indication that there is an association between two variables. It does not however indicate that one variable causes the other [45]. Pearson correlation analysis was conducted to determine the possible association between guest satisfaction and the two variables, hotel hospitality and servicescape. With a correlation coefficient of 0.65, the results revealed that there is a fairly strong association between hosting quality of hosting behaviour offered and the level of guest satisfaction with the overall hotel services. The correlation analysis between innovativeness of hotel's physical environment and guest satisfaction also yielded a significant result (coefficient of 0.53) that indicated that there is a positive strong association between the two variables. According to [46] and [47], correlation coefficients within the range of 0.50 and 0.69 reflect substantial to strong correlation between the two variables.

TABLE V: PEARSON CORRELATIONAL ANALYSIS

	Guest Satisfaction
Hotel Hosting quality	0.65*
Physical Environment	0.53*

*Significant at the 0.01 level.

C. Hierarchical Moderated Regression Analysis

Referring to Table 6, the main effects of independent variable (hotel hosting quality) and one control variable (star rating) were entered into the Regression Model 1. In Model 2, the moderator variable (innovativeness of physical environment or PEI) was entered along with the other two variables that have been included in Model 1 earlier. Finally, Model 3 included the two-way interaction term (PEI X hotel hosting quality) together with all variables entered in Model 2.

With R^2 being equal to 0.457, the results indicated that the explanatory power of the final model (Regression Model 3) was significantly higher than that of the other two earlier models (0.433 and 0.456 for model 1 and model 2 respectively). The results of the hypotheses testing are

projected in the final model or Model 3.

TABLE VI: HIERARCHICAL MODERATED REGRESSION ANALYSIS

Regression Models	Standardized Coefficients	t-value
Model 1		
Hosting quality	.531	1.254**
Star Rating	.481	2.111*
$R^2 = 0.433$		
Model 2		
Hosting quality	.558	3.278**
Star Rating	.474	1.376
PE Innovativeness	.539	2.988*
$R^2 = 0.456$		
$\Delta R^2 = 0.02$		
Model 3		
Hosting quality	.579	3.222**
Star Rating	.398	2.621
PE Innovativeness	.542	2.789*
Hosting quality X PEI	.511	2.997*
$R^2 = 0.457$		
$\Delta R^2 = 0.01$		

Dependent Variable: Guest Satisfaction

Note: * $p < .05$, ** $p < .001$

D. Hypothesis 1: Relationship between Hotel Hosting quality and Guest Satisfaction

It is posited in this study anticipated that hotel hosting quality had a significant positive effect on guest satisfaction. With a beta coefficient (β) of 0.579, statistical supports were found for the hypothesized main effect at a highly significant level of 0.01. This result indicated that the hosting quality hosting behavior offered by the hotels may have a substantially strong positive relationship with guest satisfaction with the overall hotel services.

E. Hypothesis 2: Moderating Effects of Innovativeness of Hotel's Physical Environment on the Predicted Relationship between Hosting quality and Satisfaction

It is hypothesized that the innovativeness of hotel's physical environment will moderate the predicted relationship between hotel hosting quality and guest satisfaction in the context of hotel services. The interaction term between innovativeness of hotel's physical environment and hotel hosting quality was significant at 0.05 level and in an expected positive direction ($\beta = 0.511$, $t = 2.997$), and thus the hypothesis was supported. This study revealed that the more innovative the physical environment, the stronger the effect of hotel hosting quality on guest satisfaction.

VI. DISCUSSION

As expected, the results of this revealed a significantly strong positive relationship between the hosting quality and hotel's guest satisfaction. The more hospitable the service offered by the hotel as perceived by the guests, the more likely the guests will be satisfied with the overall hotel services.

Hospitality hosting quality is the ingredient or element of service encounter that is responsible for delivering superior

quality and memorable experience [4]. According to [48], offering quality service is still not sufficient as consumers in virtually every context expect something extra or enhanced service. This something extra or enhanced service is referring to hospitality [49]. Hospitality is focussing on the role of host-guest personalized relationship in creating memorable experience while the physical space or environment where the encounters takes place is playing a vital role in making the experience more memorable to the guests.

The interactional effect of the innovativeness of the physical environment and hotel hospitality should be able to enhance the level of guest satisfaction substantially. Guests should be able to experience memorable and enjoyable service if the physical environment is innovative, unique and different from the typical hotels. Creating a unique service halls or physical evidence is particularly important when hedonic consumption is involved [37], [27] such as in the hotel services. Hedonic consumption emphasizes on the need for emotional engagement, pleasure, fun and entertainment. In this context, the innovative environment serves as an affect-creating medium to arouse visceral reactions that contribute positively to service satisfaction. Apart from that, the innovative atmosphere of a hotel may serve not only as attention-creating medium to attract the potential guests but also as message-creating medium by which the hotel reflects its warm hospitality treatment.

The results of this study could also imply that physical environment is part of hospitality itself. Reference [50] argued that hospitality consists of a harmonious mixture of three elements identified as product (such as bed in a hotel), behaviour (such as smiling to the guests) as well as environment (such as the furnishing of the guest rooms).

VII. LIMITATION AND SUGGESTIONS FOR FUTURE RESEARCH

An inherent limitation of this study pertains to its sampling technique. This study employed convenience sampling and the sample size was considerably small. Thus, results should not be generalized to the larger population of hotel guests in Malaysia.

Several directions can be taken in future research pertaining to the influences of hotel physical environment and hosting quality hosting behaviour. As the concept of familiarity is playing an important role in satisfaction with tourism-related experiences, it will be interesting to conduct comparative study between the local versus foreign hotel guests to look into the effects of physical environment and hosting quality on the overall guest satisfaction. This present study is also beneficial to be replicated in the contexts of luxury restaurants as well as airline services. It would also be interesting to study the antecedents of hosting quality perception such as service fairness and subsequently to determine the interactional effect of physical environment and service fairness on satisfaction or behavioural intention.

VIII. CONCLUSION

This study revealed that there is a positive relationship between hotel hosting quality and guest satisfaction, and innovativeness of hotel's physical environment strengthened

the positive relationship between hotel hosting quality and guest satisfaction. In today's highly competitive hosting quality industry, the interaction between hospitable customer service and unique service environment will be able to enhance the level of guest satisfaction substantially. The marriage between the tangible as well as the intangible elements of service offerings will certainly make the service experience perfect and a memorable one for the guests. Designing a distinctive and unique hotel atmosphere is one of the ways how hotels could differentiate their service from others while at the same time creating high guest satisfaction.

According to [51], apart from the "outcome quality", consumer evaluates the service quality based on "interaction quality", the process by which the service outcome is delivered, as well as "physical environment quality", the quality of the physical surroundings where the service is delivered. Hospitality hosting quality is the element of interaction quality while servicescape represents the physical environment quality in this study. This study is very relevant in the present time because it does not only provide strong theoretical implications but also offers important managerial implications for the hotel establishments to design their service offerings.

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