

## Atmospheric Elements and Personality: Impact on Hotel Lobby Impressions

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**Abstract:** This study identifies the underlying atmospheric elements of hotel lobbies that influence a customer's impression and examines the influence of "openness" as one of the personality traits on customer's impression in Convention and Boutique hotels. A scenario approach was used to collect the data whereby photographs of the hotel lobbies were shown to Indonesian and Malaysian respondents who had experienced hotel stay. The results show that "Lighting" dimension is the most influential factor on lobby impression for both Convention and Boutique hotels. Besides "style" was found as the lowest considered dimension in Convention Hotels, whereas "style" and "colors" were found as the lowest dimensions in Boutique Hotels. The overall lobby impression of Boutique Hotels was found to be higher than that of Convention Hotels. The results also show that Openness as a personality trait has a low positive influence on customer's lobby impression. The findings of this study highlight the importance of hotel design features. Since "lighting" dimension is found to be such an important dimension for both hotel types, the designers of these two kinds of hotels should highlight this dimension to attract the customers. Limitations of this study, its implications and future research directions are highlighted.

**Key words:** Atmospherics • Hotel lobby • Servicescape • Personality type

### INTRODUCTION

Development of customer preferences has forced many hotels to improve their distinctive designs. They create unique and differentiated design of lobby to attract costumers' attention and emotional appeal. With so many brands coming up, hotels are using their lobbies to provide product and service differentiation [1]. Because of its impact in forming many of the first impressions by guests, a hotel lobby could be considered one of the most important *servicescapes* [2, 3]. It is usually easier to meet or exceed customer expectations when the first impressions have been positive [4]. Those impressions or attitudes that are formed based on a physical space help create a context for the services that will follow [3]. In addition, the effectiveness of the physical property to attract customer attention is also influenced by the ability of customer's to perceive him/her. This ability is influenced by customer's personality that can also be interpreted as the pattern of characteristic thoughts, feelings and behavior that distinguishes one person from another and that persists over time and situation [5]. Customer's personality can

also be considered as the sum of biologically based and learnt behaviors which form the person's unique responses to environmental stimuli [6].

In this backdrop, we aim to identify the underlying atmospheric elements of hotels' lobby that mostly influence a customer's impression in the convention and boutique hotels. This paper also seeks to understand the influence of customer personality on customer's impression of hotel lobby. To explore this, we analyze data collected from Indonesian and Malaysian samples and the results are reported in this paper.

### Literature Review

**Impression of Hotel Lobbies:** Firms have long realized the importance of hotel appearance to costumer's first impression. Hotel appearance gives "the direct impact of physical stimuli on human emotions and the effect of physical stimuli on a variety of behaviors, such as work performance or social interaction" [7] and helps visualize the promise about their service. The physical design and décor have the potential not only to establish a firm's image, but also to influence the behaviors and feelings of customers and employees [2].

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The lobby as a part of hotel is a room in a building which is used for entry from the outside. Among the many public areas, the hotel lobby has the single greatest impact on guests and visitors [8]. The lobby is a total design environment, engendering a sense of arrival socially and physically [9]. Lobbies provide a common area for guests to relax and greet visitors [10]. One of the important functions of a lobby is that it serves as the main circulation space, directing guests to the various parts of the hotel [8]. Public spaces, especially hotel lobbies, are playing a bigger role in hospitality than ever before [1]. Contemporary roles of hotel lobbies are being mentioned as social and cultural meeting places. Bold colors, high-technology lighting applications and sculptural furnishings and finishes typify the latest trends in lobby design [11].

In addition, physical environment is defined as the natural or built environment [12]. Built environments are considered the adaptations that people make to their cultural environment [13]. Davis [14] identifies physical structure, physical stimuli and symbolic artifacts as the three main elements of the physical environment. Physical environments comprise tangible and intangible elements. Intangibility is an attribute that contains no tangible quality and thus, cannot be measured [15]. On the other hand, tangibility refers to qualities, such as physical facilities, equipment and appearance of personnel [15]. Bitner [2] took the concept of atmospherics a step further by developing a framework that addresses the effects of the physical environment on customers in service settings.

**Atmospheric Elements:** Five dimensions of atmospheric elements are highlighted in the literature: Style, Layout, Colors, Lighting and Furnishings. Architectural styles classify architecture in terms of form, techniques, materials, time period, region, etc. [16]. An examination of some style best practices in the hotel industry reveals that the architectural style of a hotel has an impact on the profitability and success of the hotel. Layout accessibility refers to the way in which furnishings, service areas and passageways are arranged and spatially related [17]. Color surrounds us. It penetrates our bodies as light waves. Color is divided into three psychological dimensions: hue (the color itself), value (the lightness or darkness of the color) and saturation (the intensity of the color). Color and light are inseparable. In the absence of light, color cannot exist. In all interior color decisions, the proposed color must be examined in the environment in which it is to be used so that the true effects of lighting can be determined during both daylight and artificial light [18]. The function of architectural design as well as interior design and décor plays an important role in customers'

satisfaction level and contributes to the attractiveness of the physical environment [19]. One important factor, seating arrangement in particular, not only affects where people sit, but also the character of interaction that can occur between them [14].

**Personality Type:** Human beings differ from one another in a number of ways – the most important being their personality type [20]. Pervin [21] defined personality as “a set of points falling along several behavioral dimensions, each corresponding to a trait, resulting in a unique profile, different from that of other individuals”. One of the tools to measure the personality trait is The Five-Factor Model (FFM). It is an empirical generalization about variation of personality traits [22]. The five factors of FFM are frequently labeled as neuroticism (N), extraversion (E), agreeableness (A), conscientiousness (C) and openness (O).

The factor of interest used in this study to reflect the customer personality type, openness, describes the breadth, depth and complexity of an individual's mental and experiential life [23]. Openness relates to broad information seeking, critical information judgment and preference for thought-provoking document. Open people, who are imaginative, inventive, creative and curious show signs of an inherent interest for new ideas. Both characteristics and the search pattern of open students could be compared to innovators [24]. Open individual is also unconventional and prepared to question authorities [25].

**Convention Hotels and Boutique Hotels:** This study seeks to identify the underlying atmospheric elements of hotels' lobby that mostly influence a customer's impression in the convention and boutique hotels. Therefore the focus will be on convention and boutique hotels. Convention hotels are designed to host conventions as well as national and international meetings. With their number of rooms ranging from 500 for small meetings to 1,500+ for larger meetings, they adhere to contemporary design and modern concepts to attract customers. On the other hand, Boutique hotels are considerably smaller than mainstream hotels, often ranging from 3 to 100 guest rooms and differentiate themselves from larger chain/branded hotels and motels by providing personalized accommodation and services/facilities. Boutique hotels are enterprises where staff and customers are bound by relations and there is a distinctive authentic atmosphere [32]. Differentiation between the Convention and Boutique hotels exists in other respects also: Boutique hotels are always individual and therefore extreme in physical design and unlikely to be found amongst the homogeneity of large chain hotel groups like Convention hotels.

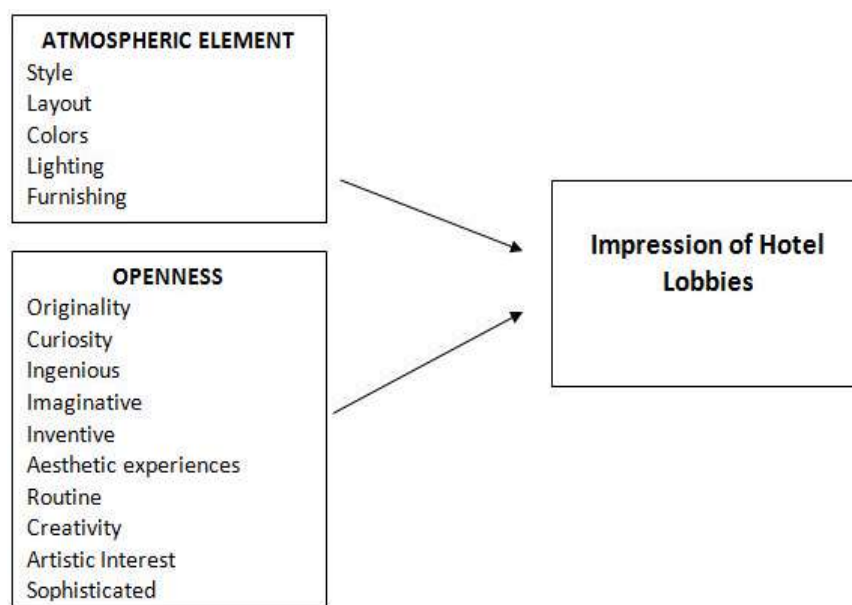


Fig. 1: Theoretical Framework

## MATERIALS AND METHODS

**Sampling Design and Data Collection:** This study involved distribution of self-answering questionnaires to 300 students from the National University of Malaysia. Both purposive sampling (judgmental sampling) and convenient sampling were used. Using purposive sampling, respondents were chosen based on specific characteristics --- the respondents were Malaysian and Indonesian students pursuing their master's degrees at Universiti Kebangsaan Malaysia. Convenient sampling implied that the respondents who filled up the questionnaire were the students who voluntarily wanted to fill up the questionnaire without any compulsion by the interviewee. 120 responses were collected representing a response rate of 40%. Of these, only 118 responses were used for data analysis as two questionnaires were found to be incomplete. The respondents were selected based on the following criteria: a) must be a student with at least 20 years of age; b) must have work experience of at least one year; and c) must have experienced stay at a hotel.

**Measurements:** "Atmospheric elements" was measured by adapting the scales developed by Countryman and Jang [3]. This variable has the following indicators: style, layout, colors, lighting and furnishings. "Customer personality traits" was measured using the scale adapted from Ahmad [26] and in this study, "openness" is the indicator used to measure this variable. "Impression of

hotel lobbies" was measured using the scenario approach. The scenario approach used eight photographs of hotel lobbies, four from convention hotels and four from boutique hotels. The study is limited only to the impression of hotel lobbies from Malaysia and Indonesia.

**Reliability Test:** Reliability test was conducted to measure the consistency of the measuring instrument. Cronbach's alphas were calculated to assess the internal consistency of atmospheric elements and personality trait. Cronbach's alpha reliability estimates are used to measure the internal consistency of the scales [27]. In this study, the Cronbach's alpha of each construct was found to be greater than 0.8, indicating a strong reliability for our survey instrument.

## RESULTS AND DISCUSSION

**Descriptive Statistics:** 48.3% male and 51.7% female respondents participated in this study. The respondent age profile was: 20-25 years (45.8%), 26-30 years (32.2%), 31-35 years (15.3%) and 36-40 years (6.8%). 45.8% respondents visited a hotel 1-2 times a year, 25.4% visited 3-4 times, 16.1% visited 5-6 times, 9.3% visited 9 times or more while 3.4% visited 7-8 times. Frequency of visiting a hotel per year can be an indication of how deeply respondents know a hotel. In terms of monthly income, 44.1% earned between RM 1001-RM 2000, 34.7% earned less than RM 1000, 11% earned more than

Table 1: Result of reliability analysis

Variable	Convention Hotels		Boutique Hotels	
	<i>Number of items</i>	<i>Cronbach's alpha</i>	<i>Number of items</i>	<i>Cronbach's alpha</i>
Atmospheric elements				
Style	5	0.93	5	0.93
Layout	4	0.93	4	0.95
Colors	3	0.92	3	0.87
Lighting	3	0.93	3	0.96
Furnishings	3	0.88	3	0.94
Personality trait	<i>Number of items</i>	<i>Cronbach's alpha</i>		
Openness	10	0.86		

RM 4000, 6.8% earned between RM 2001-RM 3000 while 3.4% earned between RM 3001-RM 4000. Monthly income can be an indicator for figuring out how wealthy a respondent is to lodge in a hotel and what type of hotel will s/he choose. Further, 44.9% Malaysian against 55.1% Indonesian took part in this study. 62.7% respondents lived in urban areas while 37.3% lived in rural areas. Also, 72.95% respondents were single while 27.1% were married. No divorced respondents participated in this study.

**Dimensions of Atmospheric Elements:** Factor analysis was conducted on the 144 questions (72 items for each hotel type) used to measure the effects of atmospheric elements on customer impression of hotel lobby. Principal component analysis reduced 72 items from Convention and Boutique hotels into 18 indicators. These 18 indicators were further divided into 5 dimensions namely:

- *Style*, with indicator: Current, Refined, Artful, Beautiful (S) and Impressive.
- *Layout*, with indicator: Graceful, Proportionate, Accommodating and Uncluttered.
- *Colors*, with indicator: Beautiful (C), Soothing and Pleasant.
- *Lighting*, with indicator: Appropriate, Inviting (LT) and Positive.
- *Furnishings*, with indicator: Beautiful (F), Comfortable (F) and High quality.

In case of Convention Hotels, under Style dimension, artful has the highest factor loading. That means Artful has high level consideration for Style dimension. It can be interpreted when people assess the effect of style on lobby impression; artful has high consideration to give more impact to the assessment process. In Layout dimension, proportionate has the highest factor loading. It can also be interpreted that placement all of the things

on hotel lobby must be proportionate for getting high assessment on Layout dimension. The precious placement of lighting design on hotel lobby that can arouse inviting feeling will give highest impact to assess Lighting dimension when inviting indicator had the highest factor loading. The colors that can arouse soothing feeling also will give highest impact together with placement of furnishings that can give comfortable feeling.

Based on factor loading values of Boutique Hotels dimensions, it can be concluded that when people assess a lobby hotel, they consider whether the hotel lobby style feels beautiful or not, whether the layout of hotel lobby is proportionate or not, whether the lighting design is appropriate with the overall theme and can arouse positive feeling or not, whether placement of furnishings makes the costumer feel comfortable or not and also whether the colors of hotel lobby can give soothing feeling to the customer or not. These indicators will impact most the overall assessment of Boutique Hotels. These observations are supported by theory. Feeling is a key driver of customer responses to service environment [28]. This theory is supported by the Mehrabian-Russell stimulus-response model and the Russell model. Mehrabian-Russell stimulus-response model holds that the environment, its conscious and unconscious perception and interpretation, influence how people feel in that environment. Feelings are central to the model, which posits that feelings, rather than perceptions or thoughts, drive behavior. Russell model suggests that emotional responses to environments can be described along two main dimensions, pleasure and arousal. Pleasure is a direct, subjective response to the environment, depending on how much the individual likes or dislikes the environment. Arousal refers to how stimulated the individual feels, ranging from deep sleep (lowest level of internal activity) to highest levels of adrenaline in the bloodstream [28].

Table 2: Atmospheric elements of Convention Hotels and items

Dimensions and items	Convention Hotels		
	Factor Loading	Eigen value	% of variance
<i>Style</i>		3.88	77.51
Current	0.60		
Refined	0.78		
Artful	0.88		
Beautiful	0.83		
Impressive	0.80		
<i>Layout</i>		3.25	81.22
Graceful	0.74		
Proportionate	0.88		
Accommodating	0.86		
Uncluttered	0.77		
<i>Lighting</i>		2.61	87.00
Appropriate	0.86		
Inviting	0.88		
Positive	0.87		
<i>Colors</i>		2.59	86.38
Beautiful	0.87		
Soothing	0.89		
Pleasant	0.84		
<i>Furnishings</i>		2.47	82.39
Beautiful	0.77		
Comfortable	0.86		
High Quality	0.85		
Dimensions and items	Boutique Hotels		
	Factor Loading	Eigen value	% of variance
<i>Style</i>		4.02	80.43
Current	0.65		
Refined	0.77		
Artful	0.82		
Beautiful	0.89		
Impressive	0.88		
<i>Layout</i>		3.47	86.70
Graceful	0.84		
Proportionate	0.90		
Accommodating	0.88		
Uncluttered	0.85		
<i>Lighting</i>		2.76	92.09
Appropriate	0.92		
Inviting	0.93		
Positive	0.92		
<i>Furnishings</i>		2.70	89.87
Beautiful	0.90		
Comfortable	0.91		
High Quality	0.88		
<i>Colors</i>		2.51	83.74
Beautiful	0.77		
Soothing	0.88		
Pleasant	0.86		

Table 3: Standardized regression weights

Latent Variable	Convention Hotel		
	The Highest	Indicator the Lowest	Cumulative
Style	Artful (0.94)	Current (0.70)	0.85
Layout	Proportionate (0.94)	Graceful (0.80)	0.87
Colors	Soothing (0.92)	Pleasant (0.85)	0.89
Lighting	Inviting (0.92)	Positive (0.89)	0.90
Furnishings	Comfortable (0.92)	Beautiful (0.80)	0.87
Overall lobby impression	Beautiful (0.87)	Good (0.77)	0.81
Openness			0.39
Total atmospheric Elements			0.876
Latent Variable	Boutique Hotel		
	The Highest	Indicator the Lowest	Cumulative
Style	Beautiful (0.96)	Current (0.71)	0.87
Layout	Proportionate (0.94)	Uncluttered (0.89)	0.91
Colors	Soothing (0.92)	Beautiful (0.78)	0.87
Lighting	Inviting (0.94)	Appropriate (0.93)	0.94
Furnishings	Comfortable (0.95)	High Quality (0.89)	0.92
Overall lobby impression	Beautiful (0.89)	Comfortable (0.80)	0.85
Openness			0.30
Total atmospheric Elements			0.902

**Influence of Atmospheric Elements on Lobby Impression:** We used Structural Equation Modeling (SEM) to analyze the data in order to determine which of the atmospheric elements were more influential and how much openness influenced overall impression of hotel lobby. In this study, we built two structural equation models, one for Convention hotels and the other for Boutique hotels, but similar in basic framework. Before data running and interpretation of data analysis, the model must pass through model fit measurement. Jaccard and Wan [29] recommended use of at least three fit tests to measure model fit of research models.

The confirmatory factor analysis for atmospheric elements of both Convention and Boutique hotels created five dimensions. "Lighting" dimension was found to be the factor most influential on lobby impression for both types of hotels. On the other hand, "style" was found as the lowest considered dimension in Convention Hotels, whereas "style" and "colors" were found as the lowest dimension in Boutique Hotels. The overall lobby impression of Boutique Hotels was found to be higher than Convention Hotels. Regression weights, as shown in Table III, indicate that most of atmospheric elements have high positive influence on customer's lobby impression as the value of each is above 0.80.

**Impact of Openness on Lobby Impression:** This study was also conducted with the purpose to examine how far openness as one of personality traits affects lobby impression. It was found that openness as one of independent variable in this study has a low positive influence on customer's lobby impression. Table III depicts that the effect of openness on lobby impression in Convention hotels is 0.39 and in Boutique hotels it is 0.30. This leads us to conclude that the variable "openness" has a weak influence on lobby impression for both hotel types, even though the values are positive. In our opinion, besides "openness" and atmospheric elements many other variables such as sensitivity, emotional, appeal and feels have greater influence on lobby impression. These form very complex human characteristic as human psychology has many variations that are not easy to understand and predict.

## CONCLUSION

With so many brands burgeoning, hotels are using their lobbies to provide product and service differentiation [1]. Unlike other facilities like banks, restaurants and retail stores, customers spend long period of times in hotels; the longer one stays in the facility, the greater the chance the physical environment will help

influence overall service satisfaction [30]. Customers may not return to the facility if they are unsatisfied with the service provided [19]. Both the rational-price, location, service qualities-and emotional considerations-happiness, excitement-are customers' motivating factors when choosing hospitality products [31]. The "lighting" dimension was found to be an important dimension for both hotel types. Therefore, the designers of the two kinds of hotels should highlight this dimension to attract the customers. Lighting is an extremely flexible design element. With the flick of a switch, light can be made to alter pattern, color and intensity. Lighting directs attention within a space because the eye automatically seeks out the brightest object in its field [18]. Findings of this research show that openness does not have much impact on lobby impression. We believe it is so because the impact of other factors like sensitivity, emotional appeal etc counts in determining lobby impression. Studying such factors thus presents an interesting future research direction. Overall, the findings of this research could help hoteliers and interior designers to manage their physical property by providing a unique, comforting and appealing atmosphere to deliver a positive lobby impression to the customers.

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