

# Tourist Satisfaction on Service Quality and Service Environment of Midscale Hotels in Mandalay, Myanmar

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## Abstract

In the competitive tourism business, services provided to tourists affect the success of businesses. Customer satisfaction and service quality are amongst the most important factors in the hotel industry; hence, hotel businesses should render good service and make customers feel that the money they paid is worth the value. Although service quality is perceived to bring about customer satisfaction in various studies, this aspect has not been scrutinised in the Myanmar hotel context, especially in midscale hotels. Using the SERVQUAL model, this research fulfils this gap and aims to find out whether the service quality of midscale hotels in the city of Mandalay, Myanmar, can bring about tourists' satisfaction. Furthermore, this study investigates a part of servicescape(or service physical environment) and its influence on tourist satisfaction. Partial least squares structural equation modelling (PLS-SEM) is used for the statistical analysis. The study contributes to the understanding of service performance in the context of Mandalay, and the result can be used as a preliminary guideline to develop a set of service standards for midscale hotels in Myanmar.

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**Key Words:** Hotel, Perception, SERVQUAL, Service environment, Satisfaction

## 1.Introduction

In Myanmar, the tourism sector is amongst the most viable and sustainable economic development tools and the main source of foreign exchange earnings (UNWTO, 2010). Tourism is one of the country's seven economic pillars that create jobs and revenue streams. Although tourism in Myanmar is in its infancy, it received 4.3 million tourist arrivals in 2019, which is expected to increase every year (Ministry of Hotels and Tourism, 2020). Tourism has a positive impact on the economy of a nation by contributing employment and income to its current GDP (Ivanov & Webster, 2007).

The cultural city of Mandalay was the last royal city before the British empire left Myanmar. Owing to its distinct image amongst ASEAN countries, Mandalay receives a large number of tourists who seek authentic cultural experiences. Tourism and the hotel industry developed one of the biggest world industries. As hotel industry plays an important role in tourism, the hotel business has been the bright future (Holjevac, 2003) especially before the COVID-19 pandemic. In addition, countries with developing economies need hotel businesses to constantly innovate (Nikolskaya et al., 2018) to enhance their service potential to cater to tourists. Therefore, the governments of developing countries, including that of Myanmar, encourage the hotel segments and local entrepreneurs to invest in lodging sectors and to put service quality and customer satisfaction as the main goals.

In the past years, the hotel sector in Myanmar has steadily grown, reflecting the growth in tourism. According to the statistics of the Ministry of Hotels and Tourism Myanmar, 1,704 hotels with a total of 68,167 rooms are located in Myanmar. In Mandalay, 266 hotels and 11,153 rooms were recorded in 2019 (Ministry of Hotels and Tourism, 2020). According to the local tourism office, half of these hotels can be classified as midscale hotels. The following statistics show the dramatic development of the hotel industry in Myanmar.



**Table 1:** International Tourist Arrivals in Mandalay (Ministry of Hotels and Tourism)

Year	Foreign tourists	Local tourists	Total
2016	385,031	517,290	902,321
2017	483,784	589,374	1,073,158
2018	492,097	654,608	1,146,705
2019	689,871	614,041	1,303,912

**Table 2:** Number of hotels and rooms in Mandalay (Ministry of Hotels and Tourism)

Year	Number of Hotels	Number of rooms
2016	199	7,667
2017	205	8,457
2018	219	9,073
2019	266	11,153

The above data show the dramatic increase of tourist arrivals and the growth of hotels year after year. The figures suggest high potential for midscale hotels, which are owned by local investors, to continually show positive growth. Such potential is indicated by key performance indicators such as room occupancy, average daily rate and revenue per available room. To ensure satisfactory growth rate, customer satisfaction is crucial for the hotel industry. Memorable trips are influenced by the quality of service received in a destination and experiences given by service providers, including hotels. Hence, the hotel industry in Mandalay needs to exert effort to improve the quality of service and to meet international quality standards.

Tourism has been a thriving service industry, which bears an important potential for the economy in Myanmar. Despite the COVID-19 pandemic, the industry is expected to bounce back in due time as the industry is resilient. In the meantime, the Myanmar government has made attempts to promote the tourism industry and promote high service standards in the hotel industry. Nevertheless, the amount of research concerning customer satisfaction on hotels' service quality in the Myanmar context is limited. Furthermore, customers' desire for



quality products and service in the tourism industry has been increasing (Su, 2004). As service is provided within an environment, the notion of physical environment plays a crucial part in the service being provided. The hotel environment is another factor that affects the perception and satisfaction of hotel customers. Hence, understanding how the physical hotel environment affects customer or tourist satisfaction is important. By doing so, hotel managers in Myanmar can gain insights into which aspect of their hotel's services and the service environment satisfied guests. Moreover, hotel managers can understand to what extent the service quality and service environment need to be improved. The concepts of service quality (Parasuraman et al., 1985) and servicescape (Bitner, 1992), which indicate service physical environment, have been ubiquitously studied. However, none of these studies were conducted in the Myanmar context and in the context of midscale hotels, which is perceived as an important hotel segment in Mandalay. Therefore, this study is conducted on the basis of such premise.

The purpose of this research is to determine tourists' perceptions, current service quality and service environment of midscale hotels in Mandalay and to identify their relationship with customer satisfaction. Therefore, the following research questions were raised.

1. What are the effects of perceived service quality dimension on customers' satisfaction with midscale hotels in Mandalay?
2. What are the effects of service environment on customer satisfaction with midscale hotels in Mandalay?
3. Do foreign and local Myanmar tourists have different views on satisfaction?

## 2.Literature review

### 2.1 Service quality dimensions in hotels

Service quality is an elusive concept because of the distinctive features of service, namely intangibility, perishability, heterogeneity and inseparability of production and consumption (Akbaba, 2006). Thus, quality definitions can vary from person to person and from situation to situation. Moreover, service quality involves evaluations of the outcome (i.e.,



what a customer actually receives from service) and process of service act (i.e., the manner in which service is delivered). Service quality is measured as a difference between consumer expectations of ‘what they want’ and their perceptions of ‘what they get’ (Parasuraman et al., 1993). On the basis of this concept, a service quality measurement called ‘SERVQUAL’ was proposed.

Grönroos (1984) proposed two dimensions in service quality—technical quality and functional quality—and claimed that perceived service quality is the result of an evaluation process. In this process, a consumer compares his expectations of a service with his perception of the service received.

A generic instrument called SERVQUAL was developed to measure service quality on the basis of inputs from focus groups (Parasuraman et al., 1988). SERVQUAL was based on the proposition that service quality can be measured as the gap between the service that customers expect and the performance they perceive. Respondents rate their expectations of service from an excellent organisation, and then rate the performance they received from a specific organisation. In the SERVQUAL model, service quality is calculated as the difference between customer perception and expectation, where better service quality results in a smaller gap between the two. The five service quality attributes or dimensions include:

1. Reliability: ability to perform the promised service dependably and accurately
2. Responsiveness: willingness to help customers and provide prompt service
3. Assurance: employees’ knowledge, courtesy and their ability to inspire trust and confidence
4. Empathy: caring, individualised attention the firm provides its customers
5. Tangibles: appearance of physical facility, equipment and personnel



Although service quality can be assessed using SERVQUAL, which estimates five quality measurements, service quality can also be measured by the concept of service performance, called SERVPERF, which utilises a performance-based approach using the five similar service quality components (Cronin & Taylor, 1994).

Hotels pursue customer satisfaction by providing quality service and meeting their expectations and anticipations. Therefore, hoteliers need to know customers' expectations and try to meet their needs. The hotels can improve the level of customer satisfaction by committing more resources towards improving the factors with the highest impact (Watiki, C. 2014). Table 3 elaborates previous studies that use the five dimensions of service quality in the hotel industry.

**Table 3:** Previous research on service quality in hotels

Authors	Dimensions of service quality in hotels	Results
Saleh, & Ryan, 1991	Tangibles, responsiveness, reliability, assurance and empathy	The existence of gaps between expectations and perceptions of the service is a source of dissatisfaction.
Al-Rousan & Mohamed, 2010	Tangibles, responsiveness, reliability, assurance and empathy	Empathy and tangibles have the lowest perception scores.
Khattab & Aldehayyat, 2011	Tangibles, responsiveness, reliability, assurance and empathy	Empathy and tangibles have the lowest perception score.
Stefano, Casarotto Filho, Barichello & Sohn, 2015	Tangibles, responsiveness, reliability, assurance, empathy and access	The quality of services provided in various items that expectation is above perception.



Authors	Dimensions of service quality in hotels	Results
Ali, 2015	Ambience and staff courtesy, food and beverage products and services, staff presentation and knowledge, reservation services and overall value for money	Better perceptions of hotel ambience and staff courtesy, food and beverage products, staff performance and knowledge, reservation services and financial value were likely to develop customer satisfaction.
Sunil, Shobharani, Mathew, & Rose, 2018	Tangibles, responsiveness, reliability, assurance and empathy	There exists a significant gap between what a customer expects and actually experiences. The gaps are widely identified due to the lack of the perception of the management about the varying customer need.

## 2.2 Servicescape dimensions in hotels

Servicescape are physical environments where a service is assembled and where a seller and a customer interact, combined with tangible commodities that facilitate performance or communication of the service (Bitner, 1992). Bitner's servicescape include three dimensions: ambient conditions; spatial layout and functionality; and signs, symbols and artefacts. The ability of the physical environment to influence behaviours and to create an image is apparent for service businesses such as hotels, restaurants, professional offices, banks, retail stores and hospitals. Studies claimed that the physical environment may also influence customers' ultimate satisfaction through service.

The importance of physical setting depends on the nature of the work and the nature of the consumption experience. Physical surroundings are important in service settings because



customers and employees often experience a business' facility. However, not all service firms and industries are alike, nor do they face the same strategic issues in planning and designing their servicescape (Lovelock, 1983).

According to Bitner (1992), servicescape can be identified according to three primary dimensions: ambient conditions (temperature, air quality, noise, music and odour); spatial layout and functionality (layout, equipment and furnishings) and signs, symbols and artefacts (signage, personal artefacts and décor). A complex mix of environmental features constitutes servicescape and influences internal responses and behaviours. Definitely, the dimensions of physical surroundings include all objective physical factors that can be controlled by a firm to enhance or constrain employee and customer's actions. Those factors include an endless list of possibilities, such as lighting, colour, signage, textures, and quality of materials, style of furnishings, layout, wall décor and temperature.

Previous studies have provided evidence for the strong impact of the physical environment, such as those in retail outlets, service halls, restaurants and hotels, on customer satisfaction. Receiving service in a crowded environment is a common occurrence in many hospitality venues, including restaurants (Kim & Moon, 2009) hotels (Lee & Lee, 2015). Human density in the service environment impacts customers' perceptions of the characteristics of, other customers, such as class level and social status (O'Guinn et al., 2015). The servicescape (mainly tangibles) of restaurants also affect customers' evaluations of service quality as well as post-purchase behaviour (Kim & Moon, 2009). The dimensions include ambient conditions such as noise, music, scent, lighting and temperature; spatial layout which includes the arrangement of furniture and equipment; and signs, symbols and artefacts such as décor and signage. Table 4 elaborates the findings of previous studies.





**Table 4:** Previous research on servicescape in hotels

Authors	Dimensions of servicescape in hotels	Results
Simpeh, Simpeh, Nasiru, & Tawiah (2011)	Ambience; spatial layout; and signs, symbols and artefacts	Ambience; spatial layout; and signs, symbols and artefacts are positively associated with customer patronage of hotels.
Siu, Wan, & Dong (2012)	Ambient conditions, spatial layout, functionality, spatial signs, symbols and artefacts and cleanliness	Servicescape elements positively influence customers' perceived quality of a service, and cleanliness has the greatest influence on customers' satisfaction levels.
Lee, & Kim, (2014)	Attractiveness, cleanliness, layout, and comfort	Cleanliness had a significantly direct impact on satisfaction, the results failed to support a relationship between attractiveness and service quality or satisfaction
Lee, & Lee (2015)	Design, color, material, decoration, furniture, lighting, layout, accessibility, temperature, cleanliness	The most significant servicescape need for hotel facilities was cleanliness
Artuğer (2020)	Ambient, layout, décor, signs and symbols	Ambient condition, décor, signs and symbols had a significant effect on customer satisfaction.



Authors	Dimensions of servicescape in hotels	Results
		signs and symbols are the most important and spatial layout did not affect.

On the basis of previous studies and the basic requirement of the hotel industry, cleanliness has been amongst the mandatory factors for the environmental setting. Therefore, this study includes cleanliness as an indicator in the investigation of the physical environment in the midscale hotel. Cleanliness is one of the key factors that tourists use to select hotels, regardless of property size, brand affiliation, or location. According to Cobanoglu, Ciftci, Berezina, and Ali (2018), the term “clean hotel” is amongst the most used key-words entered by travelers who are in search of accommodations for their leisure or business trips. High standards of cleanliness of a hotel helps to form customer loyalty, generate positive word of mouth, and, as a result, increase hotel occupancy and profitability(Cobanoglu et al., 2018).

### 2.3 Midscale Hotel

A midscale hotel is defined as a property that is positioned between luxury and budget hotels (Chester Chin, 2018). This positioning is characterized by unpretentious design, accessibility and reasonable price. A review of the literature reveals that most research investigating service quality in hotels has been conducted in upscale (4-star) and luxury (5-star) hotels. For the developing countries like Myanmar, the mid-scale hotels have potentials in the market. In this current study in Myanmar, the mid-scale hotel refers to hotel that is positioned between luxury and budget hotels, and is classified to the category by the Ministry of hotels and tourism, Myanmar.



### 3. Methodology

This study is an explanatory research that aims to investigate tourist satisfaction on service quality and service environment of midscale hotels in Mandalay. The questionnaire was formed according to the information from the SERVQUAL model and the four physical environment (servicescape) dimensions selected from the literature. To create the survey instrument, the questionnaire was developed and divided into four parts. The first part includes quantitative questions that measure tourist perceptions on service quality performance of midscale hotels in Mandalay using five service quality dimensions. Under the 5-point Likert scale, 20 items are included in the five dimensions; tangibility, reliability, responsiveness, assurance and empathy. The second part includes the items relating to four dimensions under servicescape: layout, facility aesthetics, ambient condition and cleanliness. These dimensions include 14 items. The questionnaire was sent for feedback to four experts in hotel service quality in the Myanmar hotel industry for validation purposes. The third part includes tourist satisfaction and the fourth part include respondent's demographic and visit information.

A pilot test for 50 respondents was carried out to test whether the questionnaire is valid and reliable for data collection. The result of Cronbach's alpha for all items of the five service quality dimensions was over 0.88, the overall items of servicescape dimensions was more than 0.930; and overall tourist satisfaction was more than 0.950. A reliability coefficient of 0.5 is considered recommended (Bujang et al., 2018). Therefore, the questionnaire used in this research passed the reliability test and was acceptable for data collection.

Researchers collected data from tourists (foreigners and local) staying in midscale hotels in Mandalay. The questionnaire survey was distributed to 430 respondents. The hotels were selected by simple random sampling, and respondents were selected by convenient sampling. After eliminating incomplete responses, 400 qualified responses were used in the study. Each respondent took about 10 minutes to complete the questionnaire. Data analysis was conducted by using partial least squares structural equation modelling (PLS-SEM) using the ADANCO software. Partial least squares (PLS) is an approach to structural equation



modelling (SEM) that allows researchers to analyse relationships simultaneously (Ramli et al., 2018). Although the aim of PLS-SEM is to model the relationship amongst latent variables, it is essentially linear regression using composite scores (Yuan et al., 2019). Instead of choosing other programmes, for instance SPSS, to run the regression analysis, this research applied PLS-SEM for the following reasons. Firstly, the sample size of 400 respondents is not high relative to the population. Secondly, some data sets do not meet the normal distribution criteria. Thirdly, PLS-SEM permits the unrestricted use of single-item and formative measures (Hair et al., 2016). Thus, PLS-SEM was selected for this study. The measurement model was also assessed on the basis of the reliability and validity of the constructs.

## 4. Findings

### 4.1 Descriptive statistics

#### 4.1.1 Demographic profile

Table 4.1 illustrates that more male tourists (58%) than female tourists (42%) stayed in Mandalay, and the majority of tourists were middle-aged. Tourists aged 36 to 45 years old were the largest group (36%), and the second largest group was composed of tourists aged 26 to 35 years old (26%). Tourists aged 56+ accounted for 14.5% the total number of tourists, those aged 46–55 accounted for 13.5% and only 9.8% were 18–25 years old, which was the lowest age group. The number of foreign tourists and local tourists was equal. Nevertheless, Europeans comprised the largest group amongst international tourists (39.5%), followed by Asians (28%) and Americans (21%).

**Table 5:** Descriptive statistics on demographic information

Variables	Number	Percentage	Nationality	Number	Percentage
<i>Gender</i>	400		<i>Respondent nationality</i>	400	
Male	231	58	Foreigner	200	50
Female	169	42	Local Myanmar	200	50
<i>Age</i>			<i>Foreign Nationality</i>	200	



Variables	Number	Percentage	Nationality	Number	Percentage
18–25	39	9.8	European	79	39.5
26–35	105	26.2	Asian	56	28
36–45	144	36	American	42	21
46–55	54	13.5	Middle Eastern	14	7
56+	58	14.5	Others	9	4.5

#### 4.1.2 Results of the survey

All the dimensions received satisfactory mean scores from 3.84–3.98 out of 5, with assurance and responsiveness dimensions having the highest average means of 3.98 (SD 0.513 and 0.521, respectively). The items related to ‘employees’ within the tangibility, responsiveness and empathy dimensions receive high average scores above 4.0. The item that received the lowest average score is related to the ‘facilities and equipment’ (below 3.8). Table 6 shows the Cronbach’s alpha coefficients, means and standard deviation scores of the service quality dimensions.

**Table 6:** Descriptive statistics of variables (service quality dimensions)

Variables	CR	Mean	SD
<b>Tangibility (AVE = 0.7397)</b>	<b>0.880</b>	<b>3.88</b>	<b>0.532</b>
SQ1:The hotel has beautiful facilities and equipment.		3.79	0.723
SQ2:The hotel’s physical structures are visually appealing.		3.84	0.643
SQ3:The hotel’s employees look neat.		<b>4.01</b>	0.516
SQ4:The atmosphere and equipment are comfortable and appropriate.		3.93	0.578
<b>Reliability (AVE = 0.7091)</b>	<b>0.866</b>	<b>3.91</b>	<b>0.550</b>
SQ5:The hotel promises to perform services by a certain time and in an accurate manner.		3.92	0.611
SQ6:When you have a problem, the hotel shows sincere concern in solving it.		3.92	0.672



Variables	CR	Mean	SD
SQ7:The hotel keeps accurate records.		3.90	0.657
SQ8:The hotel performs the service right the first time.		3.93	0.646
<b>Responsiveness (AVE = 0.7105)</b>	<b>0.863</b>	<b>3.98</b>	<b>0.521</b>
SQ9:The hotel employees tell you exactly when services will be performed.		3.99	0.580
SQ10:The hotel employees give prompt service.		3.92	0.659
SQ11:The hotel employees are always willing to help you.		3.98	0.647
SQ12:The employees are never too busy to respond to your requests.		<b>4.07</b>	0.567
<b>Assurance (AVE = 0.7208)</b>	<b>0.864</b>	<b>3.98</b>	<b>0.513</b>
SQ13:The hotel resolves guest complaints and compensates for inconveniences.		3.95	0.658
SQ14:The hotel provides flexibility in services according to guests' demands.		4.00	0.533
SQ15:The hotel provides consistency in services.		3.97	0.539
SQ16:Employee knowledge (professional, foreign language, communication) provides information and assistance.		3.99	0.667
<b>Empathy (AVE = 0.6569)</b>	<b>0.831</b>	<b>3.97</b>	<b>0.438</b>
SQ17: The hotel's operating hours are convenient to customers.		3.98	0.521
SQ18:The hotel has employees who give personal attention.		<b>4.01</b>	0.576
SQ19:The hotel has your best interest at heart.		3.91	0.540
SQ20:The hotel employees understand your specific needs.		<b>4.02</b>	0.496
<b>Tourist Satisfaction (AVE = 0.89)</b>	<b>0.939</b>	<b>3.84</b>	<b>0.703</b>
TS1:I am very satisfied with this hotel's facilities and amenities.		3.82	0.701
TS2:I believe I made the right decision in choosing this hotel as my accommodation.		3.90	0.732



Variables	CR	Mean	SD
TS3: How would you rate the overall quality of service you received in this hotel?		3.82	0.799

All servicescape dimensions received satisfactory mean scores from 3.79–3.92 out of 5, with the cleanliness dimension garnering the highest average means of 3.92 (SD 0.440). The items related to ‘employees’ within the cleanliness dimension (‘the hotel staff always keep clean’) receive high average scores above 4.0. The item that received the lowest average score is related to ‘atmosphere’ in the ambience dimension. Table 7 shows the Cronbach’s alpha coefficients, means and standard deviation scores of items in the servicescape dimensions.

**Table 7:** Descriptive statistics of variables (servicescape dimensions)

Variables	CR	Mean	SD
<b>Layout (AVE = 0.6227)</b>	0.697	3.81	0.475
SM1: The hotel layout gives enough privacy.		3.79	0.697
SM2: The hotel room layout is comfortable and looks good.		3.85	0.540
SM3: The dining room layout is comfortable.		3.82	0.575
<b>Aesthetic (AVE = 0.6659)</b>	0.750	3.79	0.474
SM4: The furniture and fixtures used by the hotel are of high quality.		3.84	0.566
SM5: The paintings and pictures are visually attractive.		3.75	0.593
SM6: The decorations of the hotel are visually appealing.		3.80	0.574
<b>Ambience (AVE = 0.5507)</b>	0.729	3.81	0.440
SM7: The ambient scent within the hotel premises is enticing.		3.74	0.679
SM8: The temperature inside the hotel premises is comfortable.		3.90	0.531
SM9: The lighting within the hotel premises creates a comfortable atmosphere.		3.78	0.643



Variables	CR	Mean	SD
SM10:The hotel makes moving around easy.		3.88	0.507
<b>Cleanliness (AVE = 0.6897)</b>	<b>0.849</b>	<b>3.92</b>	<b>0.440</b>
SM11:The lobby and public areas are clean.		3.92	0.501
SM12:The dining room and utensils are clean and hygienic.		3.92	0.516
SM13:The hotel room, bath room, toilet and amenities are clean.		3.87	0.614
SM14:The hotel staff always keep clean.		4.00	0.482

## 4.2 Result of the PLS-SEM

### 4.2.1 Effect of Service Quality on Tourist Satisfaction and Multigroup Analysis

By utilising a bootstrapping procedure in ADANCO 2.1 by Henseler and Dijkstra (2015), most constructs in the proposed model exhibited convergent validity by exceeding the AVE cut-off value of 0.50 (Hair et al., 2012). All composite reliability scores were greater than the endorsed point (0.60) (Bagozzi & Yi, 1988). The discriminant validity was attained as each AVE was above a squared correlation of the corresponding inter-constructs (Fornell & Larcker, 1981). The Fornell–Larcker criterion was examined to verify the discriminant validity, and as the Fornell–Larcker values were found to be within the criteria as the square root of each construct's AVE have greater value than the correlations with other latent constructs (Hair et al., 2016). The findings indicated the reliability and validity of the measurement in the specified model to be tested in this study.





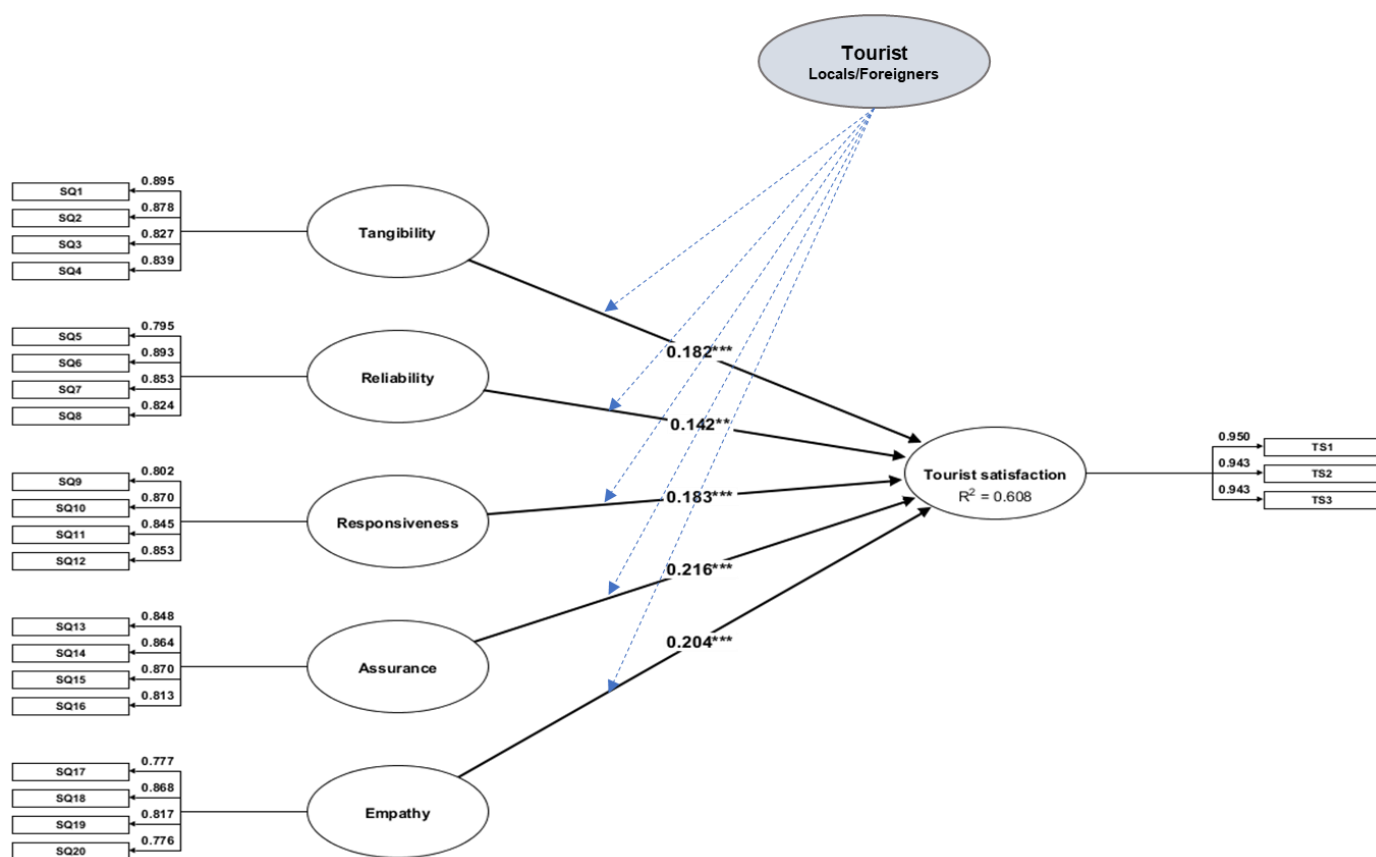


Figure 1: Conceptual model for service quality

Table 8: Squared correlations; AVE in the diagonal, Fornell-Larcker in the top triangle

Construct	Tourist Satisfaction	Tangibility	Reliability	Responsiveness	Assurance	Empathy
Tourist Satisfaction	<b>0.8935</b>					
Tangibility	0.4049	<b>0.7397</b>				
Reliability	0.4431	0.4507	<b>0.7091</b>			
Responsiveness	0.4079	0.3512	0.4065	<b>0.7105</b>		
Assurance	0.4579	0.3405	0.4961	0.4044	<b>0.7208</b>	
Empathy	0.4390	0.3757	0.4266	0.3477	0.4625	<b>0.6569</b>



Table 9: Regression table

Effect	Original coefficient	Standard bootstrap results	
		t-value	p-value (2-sided)
Tangibility -> Tourist satisfaction	0.1818	3.4557	0.0006
Reliability -> Tourist satisfaction	0.1417	2.7372	0.0063
Responsiveness -> Tourist satisfaction	0.1832	3.5029	0.0005
Assurance -> Tourist satisfaction	0.2157	3.9078	0.0001
Empathy -> Tourist satisfaction	0.2039	3.6072	0.0003

Figure 1 and Table 9 show that assurance has the highest path coefficient at  $\beta = .2175$  ( $t = 3.908$ ,  $p < 0.001$ ), and reliability has the lowest path coefficient at  $\beta = .14178$  ( $t = 2.7372$ ,  $p < 0.001$ ). The coefficient of determination ( $R^2$  value) was also tested. The examined model indicated that 60.8% of the variance of satisfaction was explained by the model, which was greater than the minimum threshold of  $R^2$  value (25%) (Hair et al., 2016).

To identify if the two groups of respondents (local versus foreign tourists) perceived service quality attributes in the five dimensions in the same way, multigroup analysis was conducted. The data were divided into two groups: tourists and foreign tourists. Then, a bootstrap analysis was performed on each dataset. This study used the t-statistic to examine the difference between the effects, given the sample size of each group, the beta coefficients and the standard errors for the path being examined (Table 10). The results indicated that the effect between the perceived service quality of the five dimensions by local tourists is stronger than that by foreign tourists, apart from the reliability dimension. However, all paths exhibited insignificant effects.



**Table 10:** Multigroup analysis between local and foreign tourists on service quality dimensions

	Group 1: Local tourists		Group 2: Foreign tourists		Difference between groups		
	n=200		n=200				
Path	$\beta_1$	Std error	$\beta_2$	Std error	t-statistic	p-value	Sig. level
Tangibility -> Tourist satisfaction	0.228	0.067	0.155	0.076	0.729	0.467	NS
Reliability -> Tourist satisfaction	0.152	0.071	0.173	0.070	0.216	0.829	NS
Responsiveness -> Tourist satisfaction	0.199	0.050	0.172	0.100	0.246	0.806	NS
Assurance -> Tourist satisfaction	0.240	0.054	0.192	0.102	0.416	0.677	NS
Empathy -> Tourist satisfaction	0.219	0.060	0.196	0.092	0.215	0.830	NS

#### 4.2.2 Effect of Servicescape on Tourist Satisfaction and Multigroup Analysis

Similar to the service quality dimension, for the physical environment dimension, most constructs in the proposed model exhibited convergent validity by exceeding the AVE cut-off value of 0.50. All composite reliability scores were greater than the endorsed point (0.60). The discriminant validity was attained as each AVE was above a squared correlation of the corresponding inter-constructs (Fornell & Larcker, 1981). The Fornell–Larcker criterion was examined to verify the discriminant validity and as the Fornell–Larcker values were within the criteria as the square root of each construct’s AVE have greater value than the correlations with other latent constructs (Hair et al., 2016). The findings indicated the reliability and validity of the measurement in the specified model to be tested in this study.



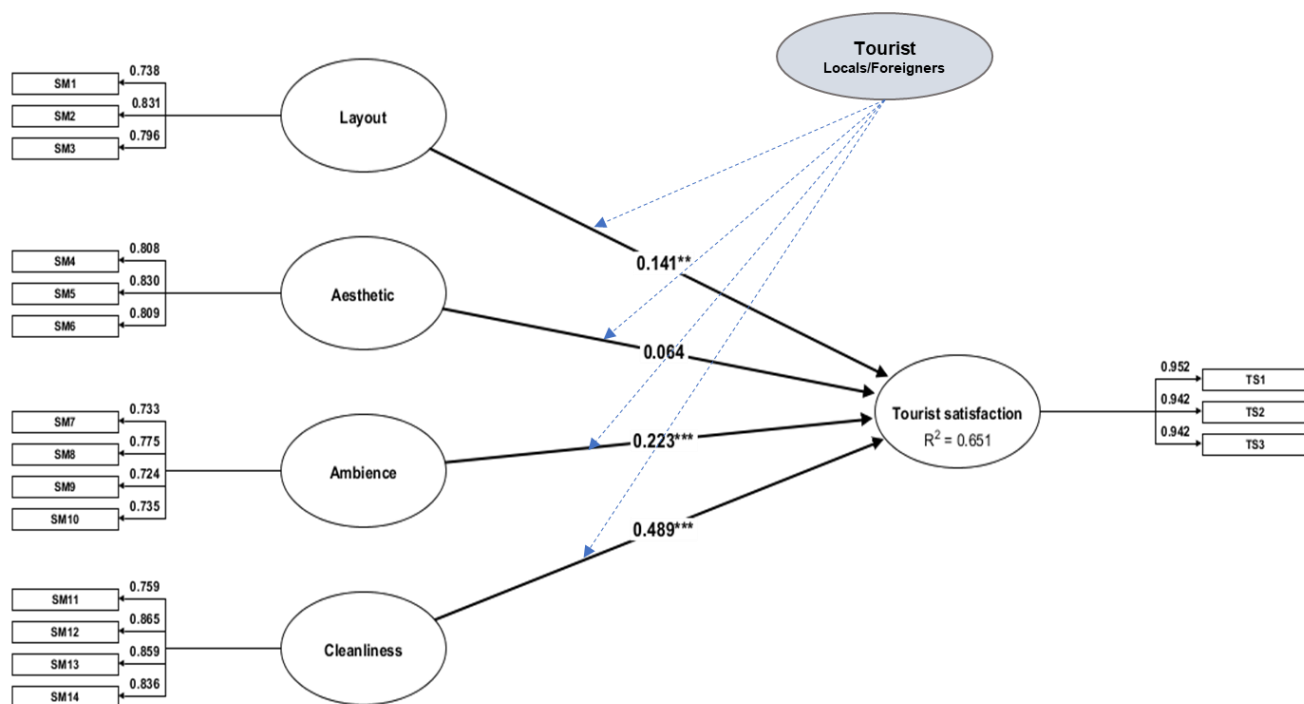


Figure 2: Conceptual model of servicescape

Table 11: Squared correlations; AVE in the diagonal, Fornell–Larcker in the top triangle

Construct	Tourists satisfaction	Layout	Aesthetic	Ambience	Cleanliness
Tourists satisfaction	<b>0.8936</b>				
Layout	0.4113	<b>0.6227</b>			
Aesthetic	0.2902	0.3079	<b>0.6659</b>		
Ambience	0.4666	0.4540	0.3221	<b>0.5507</b>	
Cleanliness	0.5853	0.4132	0.3039	0.4518	<b>0.6897</b>



Table 12: Regression table

Effect	Original coefficient	Standard bootstrap results	
		t-value	p-value (2-sided)
Layout -> Tourist satisfaction	0.1411	3.2256	0.0013
Aesthetic -> Tourist satisfaction	0.0643	1.3337	0.1826
Ambience -> Tourist satisfaction	0.2227	3.9850	0.0001
Cleanliness -> Tourist satisfaction	0.4892	10.3076	0.0000

Figure 2 and Table 12 show that cleanliness has the highest path coefficient at  $\beta = .0.4892$  ( $t = 10.3076$ ,  $p < 0.001$ ), whereas aesthetic has the lowest path coefficient with no significant effect at  $\beta = .0.0643$  ( $t = 1.3337$ ,  $p > 0.1$ ). The coefficient of determination ( $R^2$  value) was also tested. The examined model indicated that 65.1% of the variance of satisfaction was explained by the model, which was greater than the minimum threshold of  $R^2$  value (25%) (Hair et al., 2016).

Similar to the service quality approach, to identify if the two groups of respondents (local versus foreign tourists) perceived physical environment attributes in the same way, multigroup analysis was conducted. The data were divided into two datasets (i.e., local tourists and foreign tourists). Then, to examine the difference between the effects, given the sample size of each group, the beta coefficients and the standard errors for the path were examined (Table 13). The results indicate that, apart from layout, the effect between the perceived physical environment of the four dimensions by local tourists is slightly weaker than that by foreign tourists. However, all paths exhibited insignificant effects.



**Table 13:** Multigroup analysis between local and foreign tourists on service quality dimensions

	Group 1: Local tourists		Group 2: Foreign tourists		Difference between groups		
	n=200		n=200				
Path	$\beta_1$	Std error	$\beta_2$	Std error	t- statistic	p- value	Sig. level
Layout->Sat	0.1861	0.0645	0.0896	0.0667	1.043	0.298	NS
Aesthetic->Sat	0.029	0.0589	0.1185	0.0732	0.955	0.340	NS
Ambience->Sat	0.2298	0.0759	0.2404	0.08	0.096	0.923	NS
Cleanliness->Sat	0.4715	0.0732	0.4783	0.0709	0.067	0.947	NS

## 5. Discussion

Previous research in the hotel sector recognised different interpretations of the dimensions. Although the dimension structure depends on the measurement context, previous results exposed some similarities to this study. Despite the five service quality dimensions having significant effect to tourist satisfaction in Mandalay, tourists staying in midscale hotels perceived *assurance* to have the highest effect, whereas *reliability* has the weakest effect. This finding is opposed to some previous studies. For instance, Yilmaz (2009) reported that hotel customers have the highest perception score on reliability followed by assurance–responsiveness, empathy and tangible factors in the study of three-, four- and five-star hotels in Cappadocia, Turkey. The key reason that this study yields a different result may be attributed to the nature of hotel segments, which poses different expectations to tourist perceptions.

Nevertheless, the overall average satisfaction score given to the five dimensions showed that *tangibility* received the lowest score. However, considering that tangibility has a strong significant effect to tourist satisfaction following assurance and empathy, tangibility is one of the key points that midscale hotels in Myanmar should consider an area for improvement.



As aforementioned in this study, the greatest impacts on overall tourist satisfaction are from the *assurance* dimension. Elements of ‘the hotel provides flexibility in services according to guests’ demands’ receives the highest score, whereas ‘employee knowledge’ (professional skills, foreign language, communication) and ‘provide information and assistance’ have the second highest mean score. Most hotel employees must have a certificate of hospitality training and should be recognised by skill standard authority. Tourists also enjoyed when their hotel ‘provides consistency in services’ as a result of hotel employees’ cooperation, unity and conformity in service rendering. In addition, the variable ‘the hotel resolves guests’ complaints and compensates for inconveniences’ is remarkable. Hotel management in midscale hotels has positive view on guest complaints, recovery plan and guest relationships for revisit intention. These reasons proved that the assurance dimension is the strongest predictor of satisfaction in midscale hotels in Mandalay.

Moreover, the results of this research revealed that the mean scores of the overall tourist perceptions on servicescape or service environment were high in all dimensions. Tourists were relatively satisfied with the service environment of midscale hotels in Mandalay. The study suggests that three service environment dimensions (layout, ambience and cleanliness) are important antecedents of satisfaction. Layout, ambience and cleanliness had significant influence on tourist satisfaction, whereas *aesthetic* dimension was not important in midscale hotels, and no relationship was found between tourist satisfaction and aesthetic dimension. The influence of *cleanliness* dimension on tourist satisfaction is stronger than that of other dimensions. In fact, it is the most significant and the strongest servicescape dimension towards tourist satisfaction for midscale hotels in Mandalay. This generates the positive sign for the midscale hotels in Myanmar as the previous studies addressed that cleanliness is the most important factor in hotel selection (Lockyer, 2005) and high standards of cleanliness of a hotel helps generate positive word of mouth, and customer loyalty (Cobanoglu et al., 2018). *Aesthetic* is related with hotels’ artistic beauty and decoration, which tourists can appreciate during their stay. In this study, this dimension including decoration, furniture and fixtures, displayed paintings and photographs are not major concerns of tourists who stayed in



midscale hotels in Mandalay. The focus of this study is midscale hotels, where aesthetics may not be a key priority or not as important as the cleanliness factor. However, aesthetics may play an important role as a differentiator from competitors in luxury hotels, where interiors and exterior architectural design attract high-end tourists. Thus, guests in midscale hotels in Mandalay pay more attention to convenient room layout, room temperature and cleanliness with quality service.

## 6.Conclusion

This study contributes to the service quality management literature by addressing the midscale hotel segment in the Myanmar context, which has not been done in the past. Midscale hotels in Myanmar need to put more effort in improving the ‘tangibility’ element in service quality as it receives the lowest average rating amongst the five dimensions. The influence of ‘tangibility’ towards satisfaction is high. ‘Assurance’ has the strongest influence to tourist satisfaction in the midscale hotel context in Mandalay. Furthermore, ‘aesthetic’ does not have influence towards tourist satisfaction, whereas three other physical environment dimensions (layout, ambience and cleanliness) do. ‘Cleanliness’ shows the strongest influence towards tourist satisfaction, which shows a positive sign for midscale hotels in Mandalay as cleanliness is addressed to be the most important factor that tourists and visitors use for their hotel selection. The cleanliness element will have to constantly be maintained in order to ensure the high level of tourist satisfaction to the midscale hotels in Myanmar. More importantly, especially during the time of Covid 19 pandemic, the importance of cleanliness for midscale hotels can never be emphasised enough. The hotels have to ensure that they meet high cleanliness standard and must comply with the Ministry of hotels and tourism’s safety certificates to hotels, restaurants and destinations. In order to guarantee that the hotels meet cleanliness and safety standard, the management of midscale hotels are recommended to improve the quality of housekeeping and provide effective trainings for hotel cleaning. In summary, these findings provide practical benefits to midscale hotels as they reveal the





important factors that tourists pay attention to and affect tourist satisfaction. These dimensions can also be used as guidelines for the midscale segment, not only in Myanmar but in other surrounding contexts, such as in neighbouring countries like Laos PDR, Thailand or Cambodia.

Despite its contributions, this study has limitations. The current study is based only on midscale hotels in the city of Mandalay; hence, it may not represent all hotels in Myanmar. Moreover, as only two service concepts related to service quality and service environment were surveyed, the study may miss out emerging service elements which may be better portrayed using other service-related concepts, such as technology in service, self-service elements or service experience. Although a set of hotel attributes included in this study covered a variety of hotel service aspects, other attributes may likely influence tourist satisfaction. In addition, other situational factors may affect tourist satisfaction, such as demographic, social and cultural factors. However, these limitations do not diminish the significance of this study and its suggestions for compelling research in the future.



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