

## **AESTHETIC QUALITIES OF ISLAND TOURISM IN MALAYSIA'S EAST COAST REGION: DOES DURATION OF STAY MATTER IN SATISFYING TOURISTS?**

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### **ABSTRACT**

*The East Coast islands of Malaysia are becoming increasingly popular as a world-class nature tourism destination. Not only are they naturally beautiful and accessible, they are also attractive and appear as a destination image. However, whether satisfaction based on the aesthetic quality of the island is sufficient in determining a tourist's duration of stay is being questioned. This study, therefore, sets out two objectives to investigate the relationship between Aesthetic qualities and Tourist Satisfaction: (1) to investigate which aesthetic quality has a significant influence on tourist satisfaction of Malaysia's East Coast islands, and (2) to determine whether the length of stay has a significant influence on tourist satisfaction of the East Coast islands of Malaysia. This study is quantitative and cross-sectional. Smart PLS-SEM analysis was used on 150 responses; the 5000 replication of samples reveals that all aesthetic qualities contributed to tourist satisfaction. The ANOVA analysis, supported by the post hoc multiple comparison analysis among the groups, the Least Square Difference (i.e., LSD) Fisher's Test, and Games-Howell Test, yielded intriguing results for the significant difference between the duration of stay groups on these islands. All aesthetic qualities, especially scenery, showed significant differences during a short stay. The findings would raise public awareness of the importance of sustaining the aesthetic quality of island tourism while also benefiting many stakeholders. There is also a need for more promotional efforts to extend the tourists' duration of stay. However, generalizations of the results of this study are limited to responses given mainly from three main islands of Terengganu.*

**Keywords:** Aesthetic qualities; island tourism, length of stay; satisfaction; Malaysia

### **1.0 INTRODUCTION**

Aesthetic quality refers to the belief and perception of the observer, which forms into different opinions and judgments about something they observe (Suojanen, 2016). This study finds that tourists' judgments in the context of nature-based tourism represent their appreciation of aesthetic qualities that could strengthen a destination's competitiveness and value creation (Breiby & Slatten, 2018), thus explaining the importance of investigating the aesthetic quality of Malaysia's East Coast islands that span across the three states of Pahang, Kelantan, and Terengganu. Their natural beauty and accessibility have made them popular as a world-class nature tourism destination, attracting a growing number of tourists throughout the year. According to the Malaysian Department of Marine Parks (2017), 279,630 local tourists were recorded as visitors of various island marine parks. Among them were 172,822 tourists who visited the marine parks of the islands of the East Coast region of Malaysia. Meanwhile, around 131,162 international tourists visited these East Coast Island marine parks in the same year. As the islands of this region have been attracting a sizable number of tourists, they make up

the population of this present study. These East Coast Island marine parks are located in the South China Sea, stretching from as far north as Kota Bharu, closest to the Thai border, to as far south as Johor. Pahang, the largest state, shares borders with Kelantan and Terengganu to the north, Perak, Selangor and Negeri Sembilan to the west, Johor to the south, and the South China Sea to the east. Its eastern coastline stretches 210 km of the South China Sea. Among the islands of Pahang is the stunning Tioman Island. Kelantan, also known as the 'Land of Lightning,' is also famous for its casuarina-lined beaches despite having an almost entirely undeveloped coastline. Kelantan's well-liked beaches include Pantai Cahaya Bulan, Pantai Dalam Rhu, and Pantai Irama. Of the three East Coast states, Terengganu's 225-kilometre coastline, from Besut in the north to Kemaman in the south, is said to have the best stretch of beautiful beaches and even more spectacular islands. Terengganu's very popular islands are Pulau Redang, Perhentian Besar, Perhentian Kecil, Pulau Gemia, Pulau Kapas, Pulau Tenggol, Pulau Lang Tengah, and Pulau Bidong..

### **1.1 Marine Parks in Malaysia**

The Fisheries Act of 1985 protects 42 islands in Malaysia that have been designated as marine parks (Borneo Post Online, 2014). In Terengganu, 13 islands have been recognized, whereas Pahang has nine. Most of the islands including in Kelantan are declared as marine parks and comprise both terrestrial and marine components (Coral Triangle Atlas, 2019). According to Nor *et al.* (2021), the government's engagement in policy formulation, infrastructure development, and land use planning is required because of a high influx of tourists. In 1994, the government designated Payar Island as the first marine park, and Langkawi and Penang islands have since been named as tourism hotspots (Park, 2021). Scuba diving, mangrove forests, seagrass, and coral reefs in both oceans and coastlines are all unique strengths of tourism marine parks (Jabatan Taman Laut Malaysia, 2015). While marine parks' destinations compete with one another (Sangpikul, 2018), this study aims to explore the perception of island tourism as nature-based tourist attractions.

### **1.2 Island Tourism and Current Issue**

Quite characteristic of most islands is their small size. Although tourists may not experience overcrowding when they first begin travelling to an island, this situation may change with the island's increasing popularity and with more tourist arrivals. Island tourism often relates such a situation to 'tourism phobia,' which describes crowding or the over carrying capacity of honeypot tourism destinations (Seraphin *et al.*, 2018). This carrying capacity has indeed caused tensions among island residents when they must share, among other things, a limited water supply, infrastructure, space, parking space, and littering. When the negative "impact of tourism exceeds the physical, environmental, social, economic, psychological, and political capacity thresholds," it may also have an impact on the residents and tourists, as well as the nature of tourism (Bouchon & Rauscher, p. 560). The problems associated with island tourism threaten the aesthetic quality of an island (Rama *et al.*, 2020), which may finally reduce the tourists' quality of travelling experience and satisfaction. This research hopes to investigate the relationship between Aesthetic qualities (cleanliness, scenery, art/architecture, and genuineness) and tourist satisfaction. The study, therefore, has two research objectives; (1) to investigate which aesthetic quality has a significant influence on tourist satisfaction in Malaysia's East Coast islands, and (2) to determine whether the length of stay has a significant influence on tourist satisfaction in the East Coast islands of Malaysia.

## **2.0 LITERATURE REVIEW**

### **2.1 Aesthetic Quality and Satisfaction**

There are no universal patterns of aesthetic preference in Aesthetic Quality; rather, it is a complete model that can capture all important aesthetic indications from a body of literature and group them in a systematic way so that they can be used in a variety of situations (Nia *et al.*, 2017). The factors of aesthetic excellence, according to Mumcu and Kimzan (2015), are generated from the tourism product's value and experience. Aesthetic quality model has been related to the theory of Mind (TOM). TOM was cited as a process of aesthetic judgment, and it is necessary for an aesthetic experience to occur to have the ability to imagine and take perspectives, as well as interpret, decode, and recognise emotional expression (Savoie, 2019).

Several studies by Asan *et al.*(2020), Li (2017), Lu *et al.*(2020), Lupu *et al.*(2021) have all shown the importance of aesthetics. In Hong Kong, for example, 247 tourists confirmed that aesthetic qualities are related to the destination image, tourist satisfaction, and tourist loyalty (Lu *et al.*, 2020). Lu *et al.*'s study (2020) assessed aesthetic qualities in leisure and culture, architecture and perception, environment, and recreational facilities. Asan *et al.*(2020) linked aesthetic quality to happiness in a study of festival aesthetic perception. Of 336 responses, the statistics revealed that aesthetic quality was the most significant pioneer indicator of satisfaction in festival experiences.

Recent research by Lupu *et al.*(2021) traced a similar result. The authors surveyed Romania's emerging tourism destination and found the aesthetic quality dimension dominating the visual content. The study identified about 40% of the total output of the themes examined in the context of seven Romanian video spots. The theme analysis suggested a close relationship between the aesthetics of visual content and natural resources, culture, history, architecture, and landscapes. Lupu *et al.*(2021) also distinguished textual and visuospatial aesthetics, emphasizing the importance of aesthetic principles in the tourism destination experience. A tourist's appreciation and experience of tourism services that evoke a tourist destination's beauty are aesthetic qualities. In tourism, the quality of services such as the bathrooms, poor sanitary conditions in restaurants, crude infrastructure, and poor road quality in scenic areas can be assessed as they have a significant effect on tourist satisfaction (Li, 2017). These studies have argued and emphasized the potential value of aesthetics as well as its qualities, such as the cleanliness of the surrounding area and the beauty of its scenery that seems to enhance the satisfaction of a holiday experience. As literature on aesthetic qualities in the service industry asserts the positive influence of aesthetics on tourist satisfaction, this study proposes the following hypothesis:

RH1: Aesthetic qualities have a positive influence on tourist satisfaction when visiting the East Coast islands of Malaysia.

### **2.2 Cleanliness and Satisfaction**

Cleanliness is often achieved through cleaning and requires habits necessary for maintaining and preventing pollutants. Specifically, cleanliness for tourism island activities ensures that the surrounding environment and sea life are not destroyed by litter or an unmanageable waste system. Literature shows that cleanliness positively affects a tourist's level of satisfaction. A survey of Aqaba's four- and five-star hotels in Jordan (OA, 2017) elicited opinions that the tourists have safety issues and hygiene while on holiday. The survey revealed that they appreciate a hospitality industry that emphasizes safety measures and hygienic practices. They also recognize that these are the two measures that would provide them with the most basic protection throughout their stay (OA, 2017). The results affirmed that hygiene and cleanliness have a significant impact on tourists' dining satisfaction. Likewise, cleanliness

is also considered as one of the most vital factors in enhancing tourist satisfaction with a holiday experience on Phuket Island in Thailand. According to Hasan and Abdullah (2019), the satisfaction of a travel experience on Phuket Island is hugely dependent on service quality, including service value, facilities, and cleanliness. Hassan and Abdullah (2019) contended that cleanliness is critical for satisfaction in a tourism context; however, their hypotheses did not test this. The service quality that Phuket's coastal tourism provides encourages tourists to revisit the island. A similar study in Norway, Breiby and Slåtten (2018) found that most tourists in that country travelled by car. The findings revealed that tourist routes' cleanliness significantly affects the tourists' intention to experience similar roads in that country. The tourists were satisfied with the cleanliness of the roads and declared their intention to recommend the same route to others. In line with the results, the researchers suggested that opportunities for drinking clean water, minimum litter along the roads, and cleanliness at the business centres are crucial in increasing the intention to make positive recommendations to other tourists. Breiby and Slåtten (2018) examined cleanliness, but only in terms of the tourist routes' content.

### **2.3 Scenery and Satisfaction**

In island tourism, it is common to expect a great beach for sunbathing and relaxing amidst stunning sunsets worth waiting for. As with these expectations, fulfilling tourist's needs and wants has become the principal aim of island tourism. Hence their opinion is essential. Lu *et al.* (2020) confirmed that tourists generally perceive a destination's aesthetic quality through images measured by destination attributes' design and cognition dimension. The research conducted among 247 respondents using a Star Ferry Pier in Tsim Sha Tsui, Hong Kong, confirmed that the aesthetics of a destination picture was significant and was a direct antecedent of tourist satisfaction and an indirect antecedent of tourist loyalty. This research successfully shows that the tourists' impression of scenery would undoubtedly determine destination selection and travel experience satisfaction. An excellent travelling experience, according to Breiby and Slåtten (2018), is when a particular tourist destination is typically motivated by the scenery as a powerful mental image. The empirical findings revealed that scenery has a high aesthetic quality when nature strongly influences aesthetic experience. Having good viewpoints of the natural and cultural landscapes and viewpoints along the route fascinate and calm the tourists. This study shows that scenery is an essential aspect of island tourism as it has a significant influence on tourist satisfaction and intention.

### **2.4 Art/Architecture and Satisfaction**

Tourists generally appreciate accommodation next to a private beach but being accessible to the main road is a plus. They typically like to be enlightened and entertained with facts and stories about the island, its local food, music, and culture. We often read descriptions of the arts and architecture of the place in a review of a tourist's travelling experience. These are the physical and cultural value representations of the environment that usually inspire tourists to revisit their holiday destinations (Bader *et al.*, 2018). In a study of the Golden Triangle in Jordan, we were shown how 600 tourists were positively and significantly satisfied with the values attached to their new holiday environment, both physically and culturally.

Similarly, Scerri *et al.* (2019) research shows that the architectural value of a building itself can significantly affect tourists' recognition and satisfaction of their holiday destination. The researchers highlighted that it is the mutual contribution of identity, vision, and reputation. In this way, groups, institutions and cities express ideas, ambitions, and intentions captured in the distinctive design of their buildings that could encourage tourists to come and revisit the attraction site. Island tourism that involves activities related to the value placed on the arts and architecture of the place is considered an economic catalyst for coastal destinations due to its high multiplier effect on employment, ease of integration into the traditional tourist

offers and the boosts it gives to the qualification of the coastlines and innovation (Lam-Gonzalez *et al.*, 2019). Lam-Gonzalez *et al.* (2019) stated that developing island networking structures through infrastructure, cultural assets, natural environments, and promotion could increase island destinations' competitiveness.

## **2.5 Genuineness and Satisfaction**

Tourists sought genuine experiences at destinations, and as a result, it has made island tourism a competitive opportunity in search of sustainable development. Managers of tourist destinations aim towards consistently offering tourists an authentically genuine experience of the destination to increase tourist satisfaction. According to Lam-Gonzalez *et al.* (2019), island destinations will face greater competition when infrastructures, cultural assets, natural environment, and promotion are more developed. Souza *et al.* (2019) argued that from the perspective of tourism, perceived authenticity is linked not only to the consumption of what is genuine but also "experience" to provide identity, perception, and connections to the exterior world. In the same study, the authors confirmed that authenticity or genuineness is influenced by "aesthetic or sense" experience through ambience and surroundings. They also found that relationships seem to evolve between guests and hosts and guests with residents. The findings on the perception show that for the experience to be genuine, an immersion into the hosts' way of life, local culture, and destination routine would probably offer the guest a more positive experience. Therefore, it is said that the authenticity and genuineness of products are impactful toward tourist satisfaction.

Tian *et al.* (2020) research made a similar attempt to quantify the effect of authenticity as a driving factor on intangible cultural heritage tourism and tourist satisfaction. Their result suggests that intangible cultural heritage tourism affects tourists' authentic perceptions of destination or attractions, as well as their self-worth. Tourist satisfaction can therefore be influenced by the tourists' sense of self-worth, tourism experience, as well as interpersonal contact. Overall, taking into consideration the above-mentioned literature on cleanliness, scenery, architecture, and genuineness, the current study has developed the following sub-hypotheses:

RH1(a) – Cleanliness has a positive influence on the satisfaction of tourists visiting the East Coast islands of Malaysia.

RH1(b) - Scenery has a positive influence on the satisfaction of tourists visiting the East Coast islands of Malaysia.

RH1(c) – Architecture has a positive influence on the satisfaction of tourists visiting the East Coast islands of Malaysia.

RH1(d) – Genuineness has a positive influence on the satisfaction of tourists visiting the East Coast islands of Malaysia.

Figure 1 illustrates the aesthetic qualities framework of this study.

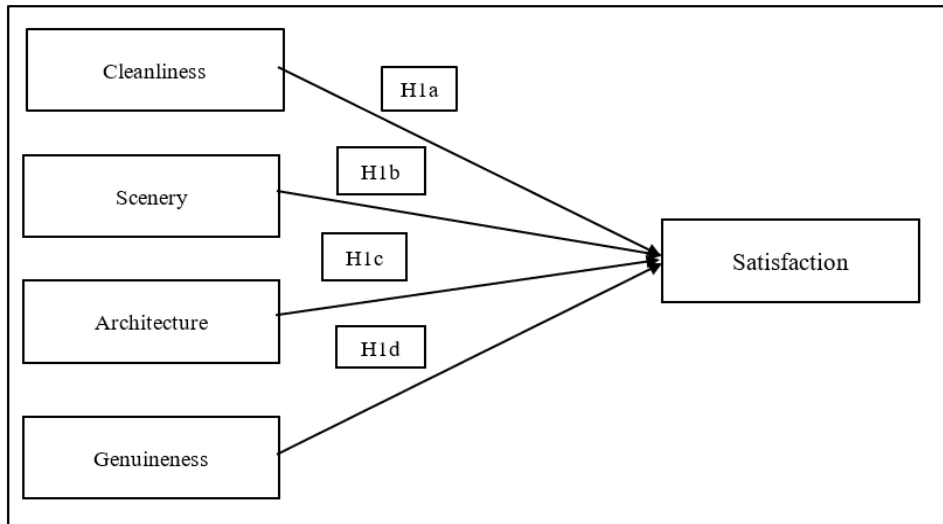


Figure 1: Aesthetic qualities framework of this study.

## 2.6 Duration of Stay

Length of stay (LOS) received little attention in the literature, but understanding LOS is crucial as it is a result of tourists' decisions (Alegre & Pou, 2006; Rodriguez *et al.*, 2018). The average LOS of tourists has become an essential metric in monitoring quality and managing tourists' expectations. It is now a performance indicator and is of interest to tourism and marketing research in predicting the economic contribution of almost every tourism destination. In Istanbul, LOS as a determinant factor was empirically examined for the cultural destination. Atsiz *et al.*(2020) uncovered the difference between one-night and longer stay visitors according to the purpose of their visit among the pure leisure tourists, business tourists, wellness, or shopping, or visiting friend or relative (VFR) tourists. Researchers found that the key to determining a more extended stay at a destination among LOS visitors largely depends on the facilities and attractions available at the destination sites. While a destination's intangible attributes exhibit a lower LOS, Camilleri (2018) associated cultural attributes to success determinant factors for a longer LOS. The researchers mentioned that tourists could stay longer on an island when they are on a low budget holiday. However, the cost has a link to a shorter LOS, particularly when the company pays the trips. Cruz *et al.*(2018) stated that the quality of products and facilities such as accommodation had become the primary indicator of business profitability. A tourist company's profit is measured according to the number of overnight stays, average LOS, occupancy rates, average daily room rates, average daily income per available or occupied room. A profitable business is gained from loyal customers, according to Kreeger and Smith (2017).

A study by Asan *et al.*(2020) that linked perception of festival aesthetics to happiness revealed aesthetics as the most significant pioneer indicator of satisfaction in the experience of 336 questionnaire respondents. The aesthetic quality dimension was again found to dominate the visual content of Romania's emerging tourism destination, accounting for about 40% of the total output (Lupu *et al.*, 2021). The theme analysis of seven Romanian video spots found aesthetics of visual content related to natural resources, culture, history, architecture, and landscapes. Lupu *et al.*(2021) distinguished textual and visuospatial aesthetics and emphasized the importance of aesthetic principles in the tourism destination experience. The presented literature on LOS has led to the following hypothesis:

RH2: Length of stay has a positive influence on tourists' satisfaction with the aesthetic qualities of Malaysia's East Coast islands.

RH2(a) – Length of stay has a positive influence on tourists' satisfaction with the cleanliness of Malaysia's East Coast islands.

RH2(b) – Length of stay has a positive influence on tourists' satisfaction with the scenery of Malaysia's East Coast islands.

RH2(a) – Length of stay has a positive influence on tourists' satisfaction with the architecture of Malaysia's East Coast islands.

RH2(a) - Length of stay has a positive influence on tourists' satisfaction with the genuineness of Malaysia's East Coast islands.

### **3.0 RESEARCH METHODOLOGY**

This study investigates how the cleanliness, scenery, architecture, and genuineness of islands affect tourist satisfaction. The quantitative analysis and survey methodology of this study followed recommendations laid out by Creswell (2014) and Saunders *et al.* (2009). The demographic profile, research variables, and open-ended query were all tailored to the respondents of this study. In developing the questionnaire sample, question items from Breiby and Slatten (2018) and Phillips *et al.* (2013) were adapted. The question items were then pretested among three experts whose comments were then considered for the final revision of the items for the pilot test. Also, based on these expert comments, the questionnaire was cleaned and updated for face and material validity. Before using the tool, the instrument was also piloted on 30 respondents to ensure its reliability. The Cronbach Alpha coefficient showed a range of 0.737 to 0.858 for all study variables, which fit Taber's (2018) recommendation that the value of Cronbach's Alpha must be  $>0.60$ . Using purposive ease sampling, the Google form, which is nowadays a common electronic tool for collecting data, snowballed to the respondents. Purposive sampling was used to obtain targeted information from visitors who visited the East Coast islands using non-probability sample techniques.

However, one of this medium's drawbacks is that researchers must find a suitable platform to reach as many people as possible. Nevertheless, a total of 150 responses were received in the time frame of one month. In terms of data collection, researchers used an automated medium to ensure that respondents answered all the questions in the standardized questionnaire. To analyze a relatively small data size of 150 samples, the Equation Partial Modeling with Least Squares (i.e., PLS-SEM) estimation multivariate data technique was used (Hair *et al.*, 2017; Ong & Puteh, 2017). PLS-SEM can be considered the optimal statistical data analysis since it allows the research to test the indicators used for measuring targeted constructs based on convergent validity and discriminant validity (Hair *et al.*, 2012; Henseler & Chin, 2010). The significance test in this PLS-SEM analysis was computed using the Bootstrapping method, which can be considered more robust than the conventional t-test method (Hair *et al.*, 2012; Henseler & Chin, 2010). As suggested by Hair *et al.* (2017), 5000 replications of the sample were computed to get reliable results for the empirical t-statistics and Bias Corrected (i.e., BCa) bootstrap.

For the comparison analysis, a series of One-Way Analysis of Variance (i.e., ANOVA) were conducted to assess the significant differences among the duration of stay groups toward all the targeted variables in this study. This analysis can be considered the optimal analysis compared to the Multivariate Analysis of Variance (i.e., MANOVA) since the number of samples for each group of this study can be considered small (Field, 2009; Pallant, 2010). As for strengthening the ANOVA results, the Welch robustness test of equality of means was also used to support the result of the Statistics produced by the ANOVA analysis. Finally, a post-

hoc multiple comparison analysis was done among the groups to support the significant difference among the duration of stay groups. Two types of tests were used for this purpose: the Least Square Difference (i.e., LSD) Fisher's Test and Games-Howell Test.

#### **4.0 RESULTS AND FINDINGS**

##### **4.1 Descriptive Analysis**

Within a month, this study achieved a 39.1% response rate. The descriptive analysis indicated that most of the respondents were female (70%) and had originally come from the East Coast region (62.7%). Besides, the majority of the respondents that participated in this study had visited Perhentian Island (40.7%), Redang Island (18%), and Kapas Island (14.7%). Most of them were found to have stayed on these islands for at least three days (42.7%), while only 2% stayed for more than six days on a trip.

##### **4.2 Measurement Model**

Table 1 shows the results of the convergent validity of the measurement model. The analysis indicates that all indicators that were used for measuring the targeted constructs in this measurement model met the minimum threshold value of at least 0.70-factor loading (Hair *et al.*, 2017; Hair *et al.*, 2012) except for the CL4 indicator. The reason is that the loading value was above 0.60 and close to 0.70. Thus, this study decided to keep the CL4 indicator for further analysis. In addition, the Average Variance Extracted (i.e., AVE) index for each construct was also above 0.50 (Hair *et al.*, 2017; Hair *et al.*, 2012), while both the reliability index (i.e., Composite Reliability and Cronbach's Alpha) for each targeted construct was also above 0.70 (Hair *et al.*, 2017; Hair *et al.*, 2012). Therefore, it can be confirmed that each variable in this measurement model can be considered to have an optimal uni-dimensionality validity (Hair *et al.*, 2017; Hair *et al.*, 2012).

<b>Indicator</b>	<b>Loading</b>	<b>AVE</b>	<b><math>\gamma</math></b>	<b><math>\alpha</math></b>
<b>Cleanliness</b>				
Natural Environment along the route	.796*	.615	.863	.785
Minimum of Litter along the Route	.855*			
Cleanliness of Service Provider	.832*			
Good opportunities for drinking clean water	.635*			
<b>Scenery</b>				
Good viewpoints along the route	.811*	.684	.896	.846
Arranged viewpoints along the Route	.811*			
Good view of the cultural landscape	.846*			
Good view of the natural landscape	.838*			
<b>Architecture</b>				
Architecture enhances experiences of nature	.790*	.708	.907	.863
Signage in the natural surroundings	.849*			
The artworks at viewpoints enhance experiences of nature	.861*			



Service providers are artistically conscious	.864*			
<b>Genuineness</b>				
Availability of flora in the natural surroundings	.738*	.618	.866	.793
Good opportunities to eat local dishes	.755*			
Service providers reflect traditions	.835*			
Good opportunities to observe wildlife	.812*			
<b>Satisfaction</b>				
Would you recommend the island to other people	.934*	.875	.933	.857
Would you revisit the island again	.937*			

Note: AVE = Average Variance Explained;  $\gamma$  = Composite Reliability;  $\alpha$  = Cronbach's Alpha; \*\*p < .01.

Table 1: Convergent Validity for Measurement Model

As the objective of this analysis is about differentiating the constructs in the theoretical framework (Henseler *et al.*, 2015; Hair *et al.*, 2017), the discriminant validity of the measurement model was accessed by applying two statistical tests, namely, the Fornell-Larcker criterion and the Heterotrait-Monotrait Ratio of Correlations (i.e., HTMT). Table 2 shows the result of the analysis using the Fornell-Larcker test. Furthermore, the correlation value between all the constructs should also be lower than the square root value of AVE for each construct (Fornell & Larcker, 1981; Hair *et al.*, 2017). In addition, each construct was also totally discriminated against since each HTMT ratio value was below 0.90 (Henseler *et al.*, 2015). As shown in Table 2, the results met all the criteria.

	Fornell-Larcker Criteria					HTMT Criteria				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
(1)	<b>.784</b>					-				
(2)	.364	<b>.827</b>				.448	-			
(3)	.489	.564	<b>.842</b>			.596	.657	-		
(4)	.410	.636	.588	<b>.786</b>		.526	.773	.695	-	
(5)	.487	.653	.640	.590	<b>.935</b>	.594	.767	.741	.710	-

Note: (1) = Cleanliness; (2) = Scenery; (3) = Architecture; (4) = Genuineness; (5) = Satisfaction.

Table 2: Discriminant Analysis for Measurement Model

### 4.3 Structural Model

The structural model analysis reported in Table 3 indicates that Cleanliness ( $\beta = 0.167$ ,  $t = 2.678$ ,  $p < 0.01$ ), Scenery ( $\beta = 0.348$ ,  $t = 6.534$ ,  $p < 0.01$ ), Architecture ( $\beta = 0.284$ ,  $t = 2.770$ ,  $p < 0.01$ ), and Genuineness ( $\beta = 0.133$ ,  $t = 2.399$ ,  $p < 0.05$ ) simultaneously had a significant and positive influence on Satisfaction. This is also supported by the 95% Bias Corrected Confidence Interval, where the confidence interval did not include zero. Besides that, these four independent constructs gave 56.9% of variance explained toward satisfaction dependent constructs. The analysis also concluded that the targeted paths' effect size and

predictive relevance could be categorized from small to medium. Although the effect size and predictive relevance were ranged from small to medium, the structural model in this study can be considered as having met the minimum requirements of a PLS-SEM model, in which the value of effect size and predictive relevance is above zero, as suggested by Hair *et al.*(2017) and Henseler *et al.*(2015). Figures 2 and 3 show the structural analysis that is using a PLS-SEM algorithm.

Path	$\beta$	t-statistic	p-value	95% BCa Bootstrap	$f^2$		$q^2$	Remark
CLE → SAT	0.167	2.678**	< .01	(0.093, 0.261)	.047		.039	Small
SCE → SAT	0.348	6.534**	< .01	(0.279, 0.389)	.151		.143	Medium
ARC → SAT	0.284	2.770**	< .01	(0.146, 0.384)	.101		.087	Small
GEN → SAT	0.133	2.399*	< .05	(0.041, 0.207)	.021		.011	Small

*Note:* CLE = Cleanliness; SCE = Scenery; ARC = Architecture; GEN = Genuineness; SAT = Satisfaction;  $\beta$  = Standardized Beta Coefficient;  $f^2$  = Effect Size;  $q^2$  = Predictive Relevance; aThe bootstrap samples was 5000 samples; \* $p < 0.05$ ; \*\* $p < 0.01$ .

Table 3: Direct Hypothesis Testing

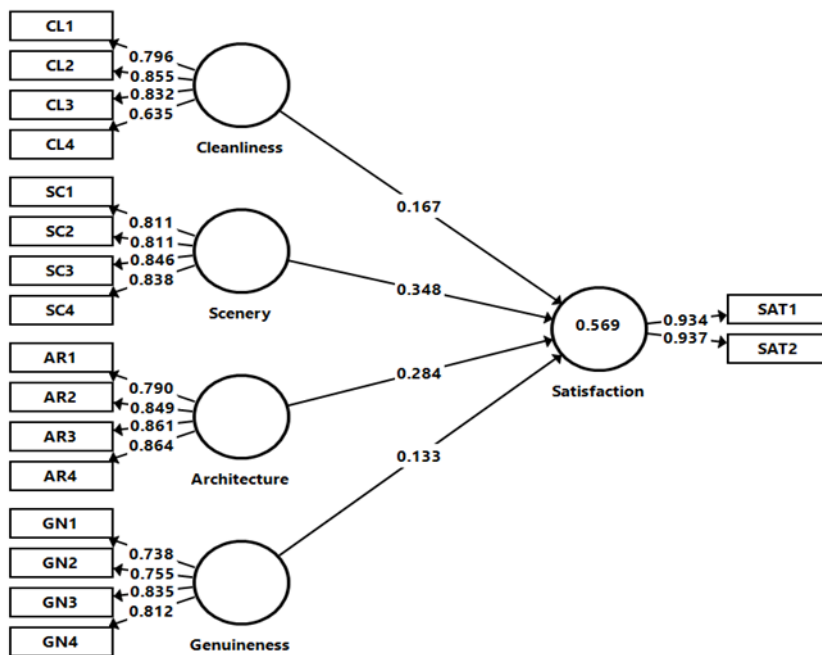


Figure 2: PLS SEM Analysis Output for Loading and Path Coefficient Values

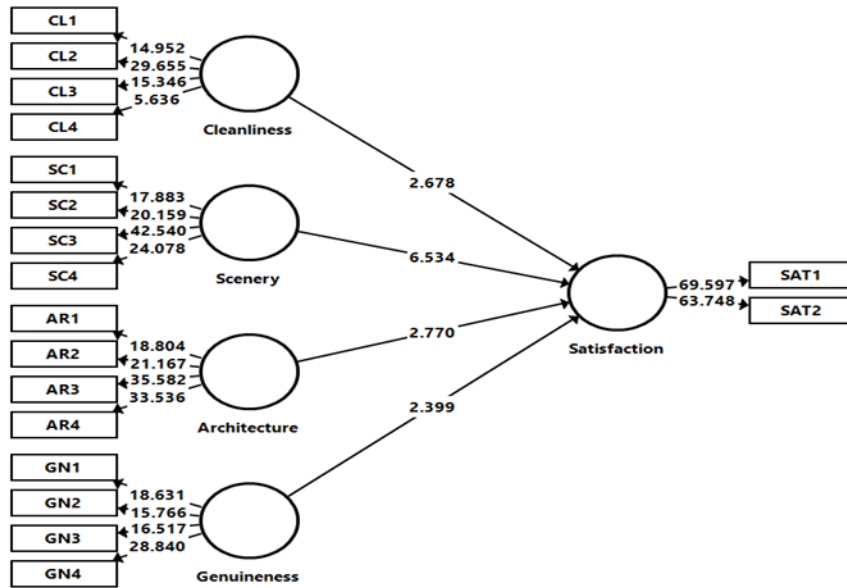


Figure 3: PLS SEM Analysis Output for t-statistic values via Bootstrapping Analysis

#### 4.4 Comparison Analysis

A series of One-Way analyses of Variance (i.e., ANOVA) were conducted to assess the significant differences among the duration of stay groups toward all the targeted variables in this study. This analysis can be considered the optimal analysis compared to the Multivariate Analysis of Variance (i.e., MANOVA) since the number of samples for each of the groups in this study is considered small (Field, 2009; Pallant, 2010). In addition, the Welch robustness test of equality of means was also used to support the result of the F-statistics produced from the ANOVA analysis to strengthen the ANOVA results. Besides that, for the post hoc multiple comparison analysis among the groups, the Least Square Difference (i.e., LSD) Fisher's Test and the Games-Howell Test were used to support the significant difference in duration of stay groups.

Referring to Table 4, the F-Statistics analysis shows a significant difference existing among the duration of stay groups toward an average level for Scenery ( $F(3, 146) = 2.374, p < .10$ ), Architecture ( $F(3, 146) = 2.640, p < 0.10$ ), and Satisfaction ( $F(3, 146) = 3.100, p < 0.05$ ) of at least 10% level of significance, whereas there is no significant difference among the duration of stay groups toward an average level for Cleanliness ( $F(3, 146) = 1.674, p = 0.174$ ) and Genuineness ( $F(3, 146) = 1.327, p = 0.268$ ). It is also supported by the Welch robustness test of equality of means, where the analysis indicated that the average level for Scenery (Welch = 2.580,  $p < 0.10$ ), Architecture (Welch = 2.482,  $p < 0.10$ ), and Satisfaction (Welch = 3.088,  $p < 0.05$ ) was significantly different among the duration of stay groups at least 10% level of significance. The analysis indicates that the average level of Cleanliness (Welch = 2.176,  $p = 0.101$ ) and Genuineness (Welch = 1.336,  $p = 0.271$ ) was not significantly different among the duration of stay groups.

Variable	Group	M ± SD	F-Statistics (p-value)	Welch Statistics (p-value)	LSD Comparison Test <sup>a</sup>	Games-Howell Comparison Test <sup>a</sup>
CLE	(1)	4.44±0.92	1.674 (.174)	2.176 (.101)	NA	NA
	(2)	4.16±0.64				
	(3)	4.50±0.81				
	(4)	4.54±0.89				
SCE	(1)	5.25±0.64	2.374 (.073)*	2.580 (.062)*	(1) vs. (2) (1) vs. (3) (1) vs. (4)	(1) vs. (2) (1) vs. (3) (1) vs. (4)
	(2)	4.80±0.71				
	(3)	4.93±0.73				
	(4)	5.05±0.72				
ARC	(1)	4.83±0.95	2.640 (.052)*	2.482 (.070)*	(1) vs. (2) (1) vs. (4)	(1) vs. (2) (1) vs. (4)
	(2)	4.32±0.58				
	(3)	4.54±0.77				
	(4)	4.32±1.00				
GEN	(1)	4.61±0.89	1.327 (.268)	1.336 (.271)	NA	NA
	(2)	4.33±0.84				
	(3)	4.58±0.78				
	(4)	4.72±0.68				
SAT	(1)	5.33±0.83	3.100 (.029)**	3.088 (.034)**	(1) vs. (2) (2) vs. (4)	(1) vs. (2) (2) vs. (4)
	(2)	4.62±1.12				
	(3)	4.98±0.98				
	(4)	5.18±1.03				

Note: CLE = Cleanliness; SCE = Scenery; ARC = Architecture; GEN = Genuineness; SAT = Satisfaction; (1) = Daytrip; (2) = 2 Days; (3) = 3 Days; (4) = More than 3 days; M = Mean; SD = Standard Deviation; NA = Not Applicable; <sup>a</sup>Only shows the significance difference exists among the group's comparison for at least 10% level of significance; \*p < 0.10; \*\*p < 0.05.

Table 4: Comparison Analysis

A post-hoc comparison analysis employing the LSD and Games-Howell comparison tests, indicates that a tourist group on a daytrip (M = 5.25, SD = 0.64) basically had a significantly better average level for scenery compared to tourists on the 2-day stay (M = 4.80, SD = 0.71), 3-day stay (M = 4.93, SD = 0.73), and also on more than the 3-day stay (M = 5.05, SD = 0.72) duration group at a 90% confidence level. The LSD and Games-Howell comparison tests also showed the same conclusion for the perception of architecture on the duration of stay groups. Both analyses indicate that a tourist group on a daytrip (M = 4.83, SD = 0.95) basically had a significantly better average level of architecture compared to tourists from the 2-day (M = 4.32, SD = 0.58) and also more than the 3-day (M = 4.32, SD = 1.00) duration group at a 90% confidence level. Furthermore, the average level of satisfaction among the tourists on a daytrip (M = 5.33, SD = 0.83) duration group was significantly higher compared to tourists on the 2-day (M = 4.42, SD = 1.12), 3-day (M = 4.38, SD = 0.98), and also more than the 3-day (M = 4.18, SD = 1.03) duration group at a 90% confidence level.

The analyses indicate that if the average level of cleanliness were increased, it would increase the average level of satisfaction among the tourists. Simultaneously, if the average level of Scenery, Architecture, and Genuineness were increased, then the average level of satisfaction would also increase. In addition, the Scenery factor can be classified as the most influential factor that influenced satisfaction due to the highest value of Standardised Beta,

followed by the Architecture, Cleanliness, and Genuineness factor. Finally, the post-hoc comparison analysis reveals that the higher the duration of stay of the tourists, the lesser would be the tourists' perception of the islands' Scenery and Architecture tend.

## **5.0 DISCUSSION AND CONCLUSION**

This study has two primary objectives. The first determined the influence of aesthetic qualities (cleanliness, scenery, architecture and genuineness) on tourist satisfaction of the east coast islands of Malaysia according to its level of significance. Although only a small effect was found for all the aesthetic qualities, statistically, scenery had a medium effect (60% tourist satisfaction of the islands) compared to others, thus indicating that scenery is the most important aesthetic quality followed by architecture, cleanliness, and genuineness. This is supported by a few tourism scholars i.e., Asan *et al.* (2020), Li (2017), Lu *et al.* (2020), Lupu *et al.* (2021), who acknowledged that aesthetic characteristics affect a tourist's experience and satisfaction. Subsequently, the aesthetic qualities of a destination, such as scenery and cleanliness, are also identified as elements in measuring satisfaction within tourism research.

The second objective determined whether aesthetic qualities had a significant influence on the length of stay on the East Coast islands of Malaysia. In terms of LOS, the majority (42.7%) of the tourists spent three days on the island, while 13% stayed longer. As mentioned above, determining the factors that will increase the tourists' LOS is necessary for future planning and management of tourism policies (Rodriguez *et al.*, 2018). Further, the results of the comparative analysis show that all aesthetic qualities had a significant effect on LOS. Interestingly, a day trip was found to have the best effect, compared to two or more days spent on the islands. Based on LOS, the scenery was the most influential factor for satisfaction while identifying different market segments (Alegre & Pou, 2006) for island tourism.

Overall, this study established that scenery plays a significant role in the overall satisfaction of tourists. The state government should also take the initiative to develop tourism state policies that will sustain the beauty and cleanliness of the islands. Local councils or municipalities should implement regular enforcement to ensure that rubbish is efficiently collected and that proper facilities such as enough rubbish bins, toilets and changing areas are provided. There are also the local communities of the island whose close cooperation, participation and commitment are highly sought after by the government. The idea can be done through capacity building programs for job creation, small businesses, and promotion of local handicrafts to create the island's cultural image.

Scenery again leads all other aesthetic qualities where LOS is concerned. Hence, this study is relevant when destination marketers and managers develop appropriate strategies to increase tourists' satisfaction and LOS of their visit to the islands. On the other hand, the Federal and State governments need to develop and implement strategies such as attracting high-value segments and refocusing the sustainable development of island tourism toward domestic tourists during the pandemic crisis. These findings add to the body of knowledge and serve as a wake-up call to tourism operators and policymakers to investigate ways to extend tourists' LOS.

## **6.0 CONTRIBUTION/PRACTICAL IMPLICATIONS**

Similar studies by Breiby and Slåtten (2018) state that to increase overall satisfaction, the three aesthetic qualities of experience to be highlighted in marketing campaigns on a natural base environment are: firstly, *scenery* with good viewpoints of the natural and cultural landscape; secondly, *harmony*, with places to experience silence and calmness, accommodation close to nature, the architecture of businesses in harmony with the landscape, and the interior of businesses in harmony with the outdoor surroundings; and lastly, *genuineness*, with ample opportunities to encounter plants in their natural surroundings, multiple opportunities for eating local dishes, the presence of businesses that reflect or preserve traditions, and good opportunities to experience animals in nature. Therefore, academics and practitioners need to create awareness among the local communities on the importance of sustainability and its benefits. Where the private sector is concerned, a strong partnership and collaboration between travel operators, budget hotels, tourist associations and the local government could lead to improved infrastructure, facilities, amenities and activities for tourists and visitors, thus contributing to a more enjoyable and memorable holiday experience on the island. Hence, this will mean longer stays, repeat visits, loyalty, and word-of-mouth information of the island to friends and relatives. During the pandemic crisis, various tourism sectors need to meet and review the current situation to re-strategize further development and sustainability of the beautiful scenic islands of the East Coast of Malaysia.

There are some limitations to this research. Firstly, the purposive convenience sampling method was highly dependent on the respondents' snowballing efforts. The second limitation is the small number of responses. Therefore, it requires a Welch robustness test of equality of means, supported by the Least Square Difference (i.e., LSD) Fisher's Test and Games-Howell. Another limitation is that the respondents of this study were mainly from the three main islands of the state - Terengganu. Specifically, the travel experience and appreciation of aesthetic qualities were primarily limited to those of tourists who visited the islands of Perhentian, Redang and Kapas.

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