

## How port aesthetics affect destination image, tourist satisfaction and tourist loyalty?

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## **Abstract**

**Purpose-** The objective of this research is to examine the linkages between port aesthetics, destination image, tourist satisfaction and tourist loyalty in Hong Kong.

**Design/methodology/approach** –To achieve this objective, we surveyed 247 tourists in Hong Kong. Using factor analysis and structural equation model (SEM) to identify the constructs of port aesthetics and analyze its relationship with destination image, tourist satisfaction and tourist loyalty.

**Findings-** Five port aesthetics constructs were identified, namely: leisure and culture, design and cognition, atmosphere, recreational facilities, and memory. The results of SEM revealed the following: (1) port aesthetics positively influenced destination image, (2) destination image positively influenced tourist satisfaction, and (3) tourist satisfaction had a positive influence on tourist loyalty. This research also found that the indirect effect of port aesthetics on tourist loyalty via destination image and tourist satisfaction.

**Originality/value** – While the environmental qualities of a port could potentially affect destination image, tourist satisfaction and loyalty, this study developed and validated a measurement instrument of perceived port aesthetics from a tourist's perspective. Specifically, this research proposed a structural model to explain the relationships between port aesthetics, destination image, tourist satisfaction, and loyalty.

**Keywords-**port aesthetics; destination image; tourist satisfaction; tourist loyalty; structural equation modeling

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## 1. Introduction

### 1.1 Research background

Tourism is one of important drivers of the economy in Hong Kong. It contributed to around 5% of Hong Kong's GDP in 2014 (Hong Kong Tourism Board, 2016). Visitor arrivals increased by 3.2 per cent to 56.6 million in 2017 (Hong Kong Tourism Board, 2018). The development of tourism fosters destination's employment, income, tourism firms and government revenues (Chen and Tsai, 2007). How to attract the tourists to revisit destination is crucial for the development of tourism services. There has been a growing body of previous studies focusing on the interactions between quality, destination image, tourist satisfaction and loyalty (Baker and Crompton, 2000; Baloglu and McCleary, 1999; Chen and Tsai, 2007; Chi and Qu, 2008; Lee et al., 2011; Zhang et al., 2014). In particular, tourists' experiences with a destination's environment and their experience of what they see and sense could affect their overall trip satisfaction, destination image, and willing to revisit. When people plan a trip for pleasure, they choose destinations that, in their perceptions, maximize the possibility to receive an enjoyable experience. The aesthetics qualities of the destination is one of important sources of such enjoyable experience and perceived as image measures used in tourism research (Kirillova et al., 2014).

Traditionally, the notion of aesthetics has been explored in the literature of product design on consumer behavior choice (Bloch, 1995) and web sites of human-computer interaction (Lavie and Tractinsky, 2004). Extant researchers on tourism have paid increasing attention on destination aesthetics and exerting efforts in both conceptual constructs and empirical validations (Kirillova et al., 2014). Destination aesthetics have been previously demonstrated conceptually in environmental psychology (Kaplan et al., 1989), environmental aesthetics (Carlson & Lintott, 2008), and urban planning (Daniel, 2001). A physical environment affects tourists' delight and satisfaction. Destination aesthetics could possess its own characteristics and traits in that travel experience involves

the full enjoyment of a tourist into an environment that may be distinct from general surroundings (Volo, 2009). However, how and why tourists perceive the environmental qualities of destination aesthetics could potentially be related to destination image, tourist satisfaction and loyalty. Nevertheless, until now, these areas have been rarely examined in tourism management literature. Thus, the objective of this study is to fill this gap by revealing how port aesthetics influence destination image, tourist satisfaction, and loyalty.

This research provides several contributions to the existing literature on harbor tourism and tourist behavior research. First, this study takes an interdisciplinary approach to integrating aesthetics and destination marketing into the tourist behavior literature, responding to recent interests and the need for more relational strategies-related research in the context of harbor cruise tourism. In particular, this study addresses the influence of tourists' aesthetic perceptions on their loyalty and clarifies which factors are crucial in terms of their relationship to tourist satisfaction and loyalty. Second, our research contributes to the literature on tourist behavior by highlighting the effects of aesthetics and destination image in explaining customer satisfaction and the loyalty of tourists in harbor tourism. Although previous studies have recommended the importance of destination image and tourist satisfaction, few studies have empirically developed a model intended to measure port aesthetics and distinctly interpret its effects on tourist satisfaction and loyalty. To the best of our knowledge, this research is the first to examine the link between port aesthetics and tourist loyalty, which extends the destination marketing and tourist behavior research specifically in the harbor tourism context. Finally, we examine the mediating roles of destination image and tourist satisfaction in the relationship between port aesthetics and customer loyalty from a tourist's perspective. Examining customer satisfaction appears to be particularly relevant in the specific social exchange context since destination image and customer satisfaction are regarded as the key factors influencing customer loyalty. Notwithstanding, there is a lack of sufficient research providing evidence as to whether destination image and customer satisfaction mediates the effect of port aesthetics on tourist loyalty.

There are five sections in this study. The first section addresses the research motivation and those concepts central to the study. The next section provides a conceptual

background and discusses the relationships among port aesthetics, destination image, tourist satisfaction and tourist loyalty. The third section demonstrates the sample, measures, and research methods. Section 4 presents major research findings analyzed from structural equation modeling. The last section provides research findings, implications, and suggestions for future research.

## **2. Literature review and research hypotheses**

The destination marketing literature examined the determinants of customer and loyalty. Several studies demonstrated that customer satisfaction can be influenced by the service quality (Baker and Crompton, 2000; Lee et al., 2011), destination image (Chi and Qu, 2008; Rajesh, 2013), tourist perception (Rajesh, 2013), word of mouth (Satta et al., 2014). Other studies showed that tourist loyalty may be enhanced by tourist satisfaction (Chi and Qu, 2008), quality (Lee et al., 2011), destination image (Chi and Qu, 2008), motivation (Yoon and Uysal, 2005), and positive word of mouth recommendation (Satta et al., 2014). While the antecedents of tourist satisfaction and loyalty have been widely discussed in the tourism literature, an understanding of the perceptions of aesthetics and its relationships with destination image, satisfaction, and loyalty at harbor or port tourism are lacking. Therefore, port tourism authorities should acknowledge the effects of aesthetics on destination image, customer satisfaction and loyalty of tourists.

### ***2.1 Aesthetics and destination image***

The term “aesthetics” has studied over the past few years and there are a variety of meanings presented in the textbooks, articles, journals and conferences (Lavie and Tractinsky, 2004). Aesthetics refer to the science of expression being itself so defined as to be identical with every form of appreciation, intuition, or imaginative synthesis (Santayana, 1904, p. 320). It includes an attentive perception with any kind of preference, pleasing nature and attracts appreciation (Santayana, 1904, p. 320). A common meaning of aesthetics is a pleasing and beautiful appearance (Lavie and Tractinsky, 2004).

Aesthetics toward a destination is a subjective recognition, and people’s judgment towards beauty is a cognitive process (Kaplan, 1985), it is the matter of how people feel about a destination. Besides, natural landscapes are different from artworks, as an

environment could not be framed or separated from the viewer. Oppositely, all the senses of the observer are contributing in the process of aesthetics judgment (Hepburn, 1966). For aesthetics judgment for the preferences of urban landscape, it have been environmentally discussed in terms of urban planning, while aesthetics value itself is minimized to its functionality only (Maitland & Smith, 2009).

Image towards a destination is an interactive composition of thoughts, opinions, feelings, visualizations, and intentions toward a place (Tasci, 2007). Furthermore, there are two components inducing the formation of destination image, which are organic images and induced images (Rajesh, 2013). Organic images are images that closely related to individual's past experiences towards destinations. Induce images is generated through information acknowledged from external source such as promotion, destination advertising, or even descriptions from someone who have been there. Similar to aesthetics judgment, destination image can be influenced by major dimensions including perceptions, psychological characters, social experiences, media, motivations, education level and tourism marketing (Lopes, 2011). To a certain extent, image of destinations is the most important element when tourists choosing place to visit (Govers & Go, 2003).

Since destination image is affected by personal feelings, perception, and visual elements, it is believed that aesthetics of destination brings out favorable image. Tourist's appreciation of beauties and atmospheric comforting environment directly contributes to a positive destination image as well. Therefore, the following hypothesis was postulated:

*H1: Port aesthetics positively influence destination image.*

## ***2.2 Aesthetics and tourist satisfaction***

Within the tourism literature, it has been well-acknowledged that the aesthetics characteristics of a destination often been used to act as a scale of measuring tourist satisfaction. Alegre & Garau (2010) revealed that destination attributes including cleanliness and hygiene, peace and quiet as well as balance between commercial development and environmental preservation (i.e. aesthetics judgement by tourists) have been used to measure the level of tourist satisfaction. According to Chi and Qu (2008), some aesthetics characteristics of a destination are underlying dimensions of attribute

satisfaction. For instance, variety of cuisine, natural attractions, variety of shops as well as surrounding atmosphere and hygiene condition. Meanwhile, a number of researchers addressed that attribute satisfaction positively interrelates with overall satisfaction (Bolton & Drew, 1991; Chi & Lu, 2008; Oliver, 1993; Spreng, Mackenzie, & Olshavsky, 1996). Accordingly, the following research hypothesis was proposed:

*H2: Port aesthetics positively influence tourist satisfaction.*

### **2.3 Destination image and tourist loyalty**

Loyalty is recognized as someone's willingness to devote himself to a particular thing thoroughly and practically (Royce, 1995). It is an important strategy for almost every industry, which helps achieving business success. According to Reichheld and Sasser (1990), loyalty customers are able to bring economic benefits to the firm and improve earnings. For every 5% increment in retention of customers, it leads to a profit increase within 25% to 85%. Thus, loyalty is a concept that worth to be investigated thoroughly.

Specifically, a number of extant studies demonstrated that destination image plays an important role in facilitating the formation of loyalty visitors as well as their likelihood of revisiting (Baloglu & McCleary, 1999; Chen & Tsai, 2007; Chi & Qu, 2008; Chon, 1990). For a destination having favorable image, tourists are more likely to have an intention of returning to that place in the future. Therefore, destination image is perceived as one of the criteria for tourists to decide whether to make a subsequent travel. The causal relationship between destination image and tourist loyalty can be illustrated through the concept of destination image gap as well. Based on the study of Martín-Santana, Beerli-Palacio and Nazzareno (2017), destination image gap refers to the difference in image before and after tourists visiting the destination. A positive destination image gap reveals that tourists have a high degree of satisfaction and loyalty towards the destination. Therefore, destination image acts as an influential factor of whether a destination can maintain loyalty visitors. The more positive the destination image is, the greater the possibility that tourists will return to the same destination in the future. Accordingly, a research hypothesis was posited:

*H3: Destination image positively influences tourist loyalty.*

#### ***2.4 Destination image and tourist satisfaction***

The effect of destination image on tourist satisfaction has been examined by previous studies (Chen and Tsai, 2007; Chi and Qu, 2008; Tan & Kuo, 2013). It is believed that more favorable and positive image of destination will more likely to be considered in the choice of trip decision making and lead to higher tourist satisfaction. The image of destination affects the behavioral intentions of tourists (Court and Lupton, 1997). Chen and Tsai (2007) proposed a behavioral intention model from tourists of National Kengtin Park in Taiwan and found that destination image had both direct and indirect influences on behavioral intentions of tourists. Chi and Qu (2008) also found that destination image positively affected tourists' overall satisfaction from the respondents of Arkansas – Eureka Springs. Tourists' satisfaction therefore can be intensified if their expectations toward the destination image is reached (Vogt et al., 2008). According, following hypothesis was proposed:

*H4: Destination image positively influences tourist satisfaction*

#### ***2.5 Tourist satisfaction and tourist loyalty***

A number of previous studies in the marketing literature have been confirmed a positive relationship between customer satisfaction and loyalty of retention (Anderson and Sullivan, 1993; LaBarbera and Mazursky, 1983). If customers are satisfied with the suppliers' products or services, they will be more likely to repurchase, and will be more willing to spread the high qualities of products or services. In the tourism sector, there are several empirical studies pointed out that tourists' satisfaction is one of determinants of their behaviors to revisit and recommend the destination to their family members and friends (Backman and Crompton, 1991; Chi and Qu, 2008; Petrick et al., 2001). A higher level of tourists' satisfaction will lead to revisit the destination and spread positive recommendations (Yoon and Uysal, 2005). To understand the behavior of tourist loyalty is particularly important in tourism marketing because they are major sources of profit. Thus, the following hypothesis was posited:

*H5: Tourist satisfaction positively influences tourist loyalty*



## ***2.6 Aesthetics and tourist loyalty***

As mentioned earlier, port aesthetics has been recognized as the antecedents of destination image and tourist satisfaction (Kirillova et al., 2014). However, the link between port aesthetics and tourist loyalty is seldom discussed in previous studies. Lee et al., (2011) addressed the causal relationship between tour quality, tourist satisfaction and tourist loyalty. The beauty of a destination is a measuring indicator in the aspect of tour quality. For instance, if a destination can offer attractive scenery and surrounded with historical and cultural legacy, it will facilitates the formation of tourists' perceptions of high quality (Lee et al., 2011) and more likely to revisit the destination. Therefore, the qualities of a destination aesthetics may significantly influence tourist loyalty. Accordingly, the following hypothesis was proposed:

*H6: Port aesthetics positively influence tourist loyalty*

## **3. Methodology**

### ***3.1 Measures***

The measures of port aesthetics from the perception of tourists have been adopted from previous researches (Chon, 2004; Satta, Parola, Penco & Persico, 2014; Okech, 2011; Mora, 2012; Bernick & Boo, 2013; Kirillova, Fu, Lehto & Cai, 2014; Whybrow, 2015; Björk & Kauppinen-Räisänen, 2016). Seventeen attributes of port aesthetics were selected for examining customers' satisfaction and loyalty. Respondents were asked to demonstrate the critical factors affecting port aesthetics based on a mark ranging from 1= strongly disagree to 5= strongly agree on each item. Measures of tourists' satisfaction are drawn from previous researches by Baker and Crompton (2000), Lee et al. (2011), Matias et al. (2013), and Martín-Santana et al. (2017). The measures of tourist loyalty have been adopted from the studies of Zhang et al. (2014) and Shoemaker and Lewis (1999).

### ***3.2 Sample***

We conducted a convenience sampling because the respondents were occasionally encountered by the interviewers. Respondents were approached within Star Ferry Pier located in Tsim Sha Tsui in Hong Kong. The data collection was accomplished between

14th January 2017 and 5th February 2017. A total of 247 questionnaires were successfully collected.

Table 1 shows a profile of the questionnaire respondents. There were 52.6% of them were females and 47.4% were males. When asking the frequency of travelling to Star Ferry Pier, almost of all them (87.9%) said five time or less, and only 12.1% stated six times and over. As about their ages, 37% of respondents were aged 18 years or less, 42.1% were between 18 and 30, and 21.5% were aged 31 and 40, and 21.5% were 41 years old or more. Only 12.6% have received postgraduate education, in contrast to 29.6%, 30.8% and 27.1% who have received secondary or elementary education, tertiary education and undergraduate education, respectively. 30% of respondents stated that their monthly income is HK\$5000 or less, 13.8% are between HK\$ \$5001 to \$10,000, 18.6% are between HK\$10001 to HK\$20,000, 25.9% are between HK\$20001 to Hk\$30000, and 11.7% are greater than HK\$30,000. As regards to the occupation, nearly a third (31.2%) of respondents work in the service sector, 23.9% are in business sector, 18.2% are in the manufacturing sector. Students and respondents working in other sectors are accounted for 13.4% respectively. When asking the nationality of respondents, most of them (38.5%) are come from China, 19%, 14.2%, 14.6% and 13.8% are come from Asia (excluding China), Europe, Americas and other, respectively.

<Insert Table 1 about here>

#### **4. Results of empirical analyses**

##### ***4.1 Agreement level with port aesthetics, destination image, tourist satisfaction and loyalty***

In the questionnaire survey, respondents were required to express their views on port aesthetics, destination image, tourist loyalty as well as tourist satisfaction relating to Hong Kong port. A five point Likert scale ranging from strongly disagree to strongly agree (1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree) was used to measures the items. Based on the survey results, respondents' agreement level with the 17 attributes of aesthetics judgment mostly ranged from neutral to agree. Their mean scores were between 3.55 to 3.93. As shown in Table 2 below, the five items that respondents

rated as most important in aesthetics judgment include: (1) decorations and night scenery of the city can be enjoyed throughout the opposite shore of the port; (2) the port has an endless field of vision; (3) the environment of the harbors are spacious; (4) there are recreational areas next to the harbors (e.g. Tsim Sha Tsui Promenade); and (5) festive activities are held nearby the harbor. Conversely, five attributes that have been distinguished as least important towards aesthetics in accordance with respondents' agreement: (1) there are social media check-in places or photo shooting area in the harbors; (2) there are classic local snacks nearby the harbors; (3) the hotels surrounding the harbors are stylish; (4) there are coffee shop and tea house nearby the harbors, and (5) there are street artists performing around the port. For destination image, tourist satisfaction and behavioral intention, the attributes that respondents most agreed are 'overall, I am impressed by the Hong Kong recreational harbors' (mean = 3.84), 'I felt enjoyed and satisfied after visiting the Hong Kong recreational harbors' (mean = 3.9 ) and 'I would like to revisit Hong Kong recreational harbors in the future' (mean = 3.81), respectively.

**<Insert Table 2 about here>**

#### ***4.2 Factor analysis results***

Through an exploratory factor analysis using principal component analysis, the 17 aesthetics judgment attributes are categorized into several sets of underlying factors, which shown the pattern of relationships among them. With a Kaiser-Meyer-Olkin measure of sampling adequacy of 0.825, the data should be considered as meritorious for factor analysis (Hair et al., 2010). The Bartlett Test of Sphericity shows an outstanding result, with  $\chi^2 = 1229.014$  and  $p < 0.001$ . This proves there are correlations between some of the variables. As shown in Table 3, the results indicate that the cumulative variance explained is 62.02%.

**<Insert Table 3 about here>**

A detailed description of the five factors are shown as follows:

Factor 1, leisure and cultural dimension, consisting of four attributes. The item of 'there are coffee shop and tea house nearby the harbors' has the highest factor loading. This factor contributes 29.345% of the total variance. This dimension has been discussed in previous

studies (Björk & Kauppinen-Räsänen, 2016; Satta, Parola, Penco & Persico, 2014).

Factor 2, design and cognition dimension, consisting of five attributes. The item of ‘the port has an endless field of vision’ has the highest factor loading. This factor accounts for 9.901% of the total variance, which is far less than factor 1. This factor has been highlighted in previous studies (Kirillova, Fu, Lehto & Cai, 2014).

Factor 3, atmosphere dimension, consisting of four attributes. The item of ‘festive activities are held nearby the harbor’ has the highest factor loading. This factor accounts for 8.710% of the total variance. This dimension has been identified in previous studies (Bernick & Boo, 2013; Okech, 2011; Whybrow, 2015; Kirillova, Fu, Lehto & Cai, 2014).

Factor 4, recreational facilities dimension, consisting of three attributes. The item of ‘there are recreational areas next to the harbors (e.g. Tsim Sha Tsui Promenade)’ has the highest factor loading. This factor contributes 7.897% of the total variance. This dimension has been clarified in previous studies (Chon, 2004; Whybrow, 2015).

Factor 5, memories dimension, consisting of one attribute: there are social media check-in places or photo shooting area in the harbors. This factor accounts for 6.171% of the total variance. This dimension has been mentioned in the study of Mora (2012).

#### ***4.4 SEM analysis results***

Confirmatory factor analysis (CFA) is used to estimate hypothesized models of different factor structure which account for covariance of observed variables through analysis a suit of hidden variables factors. Figure 1 indicates a measurement model which consists of four latent variables factor with each relevant multiple indicator. According to the analysis of AMOS, four hidden variables factors which are port aesthetics, destination design, tourist satisfaction and tourist loyalty are analyzed in this study. For instance, port aesthetics has five observed variables (A1 - A5); destination design has five observed variables (D1 - D5), tourist satisfaction has four observed variables (S1 - S4) and tourist loyalty has three observed variables (I1 - I3).

**<Insert Figure 1 about here>**

This research used the AMOS program to assess the fit and unidimensional the model.

Table 4 shows that the value of the Chi-square/degree of freedom ( $\chi^2 = 199.178$ ,  $df = 113$ ) was 1.763 at 113 degrees of freedom, and the p-value was statistically significant below the level of 0.05. The results were not surprising because the chi-square value is sensitive to sample size (Koufteros, 1999; Shah and Goldstein, 2006). This result shows some support for believing that differences in the predicted and actual matrices are nonsignificant, indicative of acceptable fit. Moreover, the goodness-of-fit index (GFI) and the adjusted goodness-of-fit (AGFI) were 0.909, fit of recommended level of 0.09; thus, marginal acceptance can be given to this measurement. The Tucker Lewis Index (TLI) was 0.941 and Comparative Fit Index (CFI) was 0.950, which exceeded the recommended level of 0.9, further supporting acceptance of the model. In Table 4 also shows the root mean square residual (RMSR) indicates that the average residual correlation was 0.05, deemed acceptable given the rather high correlations in the original correlation matrix. The root-mean-square error of approximation (RMSEA) was 0.056. This falls well within the recommended range for conditional support to be given for model parsimony.

**<Insert Table 4 about here>**

Table 5 presents means, standard deviation, correlation, squared correlations, composite reliability, and average variance extracted (AVE) among the variables. Port aesthetics was positively correlated to tourist satisfaction, destination image, and tourist loyalty. The square root of AVE value is a complementary measure for the construct reliability (Koufteros, 1999). When the indicators are truly representative of the latent construct, variance extracted values are high. All the square root of AVE value were greater than 0.58, indicating that at least 58% of the variance in the specified indicators was accounted for by the latent construct and greater than the recommended level of 50% (Fornell and Larcker, 1981). All items correlated most strongly with their intended construct/ dimension, and the square root of the AVE for the constructs was larger than any respective inter-construct correlations. These results provide evidence of discriminant validity. In addition, the composite reliability of the constructs of port aesthetics, tourist satisfaction, destination image, and tourist loyalty scales were 0.717, 0.813, 0.840, and 0.821. All constructs exceeded the recommended level of 0.60 (Bagozzi and Yi, 1988; Hair et al., 1998; Sanchez-Rodriguez et al., 2005).

A complementary measure to composite reliability is the average variance extracted and these statistics measure the amount of variance in the specified indicators accounted for by the latent construct. Higher variance extracted values occur when the indicators are truly representative of the latent construct. Typically, recommendations suggest that the variance extracted value should exceed 0.50 for a construct (Fornell and Larcker, 1981; Bagozzi and Yi 1988; Hair et al., 1998).

**<Insert Table 5 about here>**

A SEM approach was conducted after confirmatory factor analysis enhanced the proposed model. SEM analysis aims to indicate the inter-relationships between every pair of hypothesized constructs that we developed at the beginning of the study. Chi-square per degrees of freedom, GFI, AGFI, CFI, RMR, and RMSEA were used to determine the fit of the model to the data. As shown in Figure 2, the model was acceptable ( $\chi^2 = 202.456$ , Degree of freedom = 116, CFI = 0.950, NFI = 0.893, GFI = 0.909, AGFI = 0.877, RMR = 0.020, RMSEA = 0.056). These figures provide validity for the model because the value of figures are beyond acceptable standards statistically (Hair et al. 2010). The results show that only three of the proposed hypotheses regarding port aesthetics positively related to destination image, destination image positively related to tourist satisfaction, and tourist satisfaction positively related to tourist loyalty were supported.

**<Insert Figure 2 about here>**

Table 6 shows the summary of SEM results. A positive significant relationship was found between port aesthetics and destination image ( $\beta = 0.69$ ,  $p < 0.01$ ). Thus, H1 was supported. This finding suggests that the enhancement of recreational facilities, hydrophilic trails, and artistic design at port, will increase foster the tourist's image of destination. The results also indicate that a statistical significance of a positive relationship between destination image and tourist satisfaction ( $\beta = 0.93$ ,  $p < 0.01$ ). Thus, H4 was also supported in this study. The findings are consistent with previous studies (Chen and Tsai, 2007; Chi

and Qu, 2008; Vogt, Fesenmaier & MacKay, 2008). Specifically, the impact of tourist satisfaction on tourist loyalty was significant ( $\beta = 0.72$ ,  $p < 0.01$ ). Thus, H5 was supported.

As shown in Table 6, critical ratio (CR) refers to a t-value, and t-values greater than 1.96 or lower than -1.96 indicate a level of significance of 0.05. It implies that larger t-value represents stronger proof and validity for the relationships between latent variables (Bollen, 1989; Koufteros, 1999). Therefore, H4 had the strongest evidence for its reliability, as H4 obtained largest t-value (CR= 6.282) among all six hypotheses. This followed by H1 with the second-highest t-value obtained (CR=5.286). Also, t-value for H5 (CR= 3.906) showed evidence for tourist satisfaction affecting tourist loyalty.

However, Table 6 shows non-significant results when testing port aesthetics positively related to tourist satisfaction, destination image positively related to tourist loyalty and port aesthetics positively related to tourist loyalty. Therefore, H2, H3 and H6 were not supported in this study. Nevertheless, this study found that impact of port aesthetics on tourist loyalty could be through by destination image and tourist satisfaction.

**<Insert Table 6 about here>**

## **5. Conclusions and implications**

This research attempted to explore the relationships between port aesthetics, destination image, tourist satisfaction and tourist loyalty in the case of Hong Kong. Following recent developments in destination aesthetics studies (Kaplan, 1985; Kirillova et al., 2014), port aesthetics in this study was conceptualized as a five-dimensional construct, comprising of leisure and culture, design and cognition, atmosphere, recreational facility, and memory. This study developed and validated a measurement instrument of perceived port aesthetics. Consistent with expectations, we found positive relationships between port aesthetics and destination image (H1), destination image and tourist satisfaction (H4), and tourist satisfaction and tourist loyalty (H5). Specifically, this study found the impact of port aesthetics on tourist loyalty was mediated by destination image and tourist satisfaction. However, this research did not support the relationships between port aesthetics and satisfaction, destination image and tourist loyalty, as well as port aesthetics and tourist loyalty.

### ***5.1 Managerial implications***

Destination tourism is facing fiercely competitions and the challenges are getting higher in the years to come. Therefore, it is essential to understand why tourists are satisfactory to a destination and what drives the loyalty from a destination aesthetics perspective. The major findings of this research have several managerial implications for tourism policy makers and destination marketers.

First, the exploratory and confirmatory factor analyses revealed that 17 port aesthetics measures derived from the literature review were constructed to five underlying dimensions: leisure and culture, design and cognition, atmosphere, recreational facility, and memory. These results could help port tourism marketers better acknowledge the dimensions contributing to destination image, tourist satisfaction and loyalty so that they are able to provide appropriate investment and services that meet tourists' expectation and needs. Hence, this study suggest that port tourism marketer and managers consider the practical implications of these crucial dimensions, which could be important factors in increasing tourists' destination image, satisfaction and loyalty.

Third, the SEM results showed that port aesthetics positively influenced destination image and indirectly influenced tourist loyalty via destination image and tourist satisfaction. This reflects that aesthetics is an important driving factor in fostering destination tourism (Kirillova and Lehto, 2015). The findings provide a variety of implications for destination marketers and managers. Because the dimensions of port aesthetics is critical in providing tourist pleasure and delivering an enjoyable travel experience, a destination marketer should strive to create a sense of surrounding into the destination environment in order to facilitate tourists to experience the destination in its plenteous scene and view. While some ports already have a number of specific features in their destinations (e.g. the Oriental Pearl Tower in Shanghai, China, or the Gardens by the Bay in Singapore), others may lack the features easily identifiable with the local attributes, and, in this case, such attributes should be emphasized. A destination marketers or managers could consider building an exclusively historic building or monument with which it could be uniquely associated. In addition to rich of unique features, tourists tend to view the destination aesthetics as complex bundles of features that satisfy their needs. In addition, destination marketers or managers should ensure that these features are impressive and diverse enough to enhance



tourists' image and sustain their satisfactions during a trip.

Fourth, this study also found that destination image was one of important variables in the hands of destination marketers. Destination image is a direct antecedent of tourist satisfaction and indirectly influenced tourist loyalty via tourist satisfaction. Therefore, port tourism marketers should strive to improve the tourist's image of destination. While destination image significantly influenced tourists' satisfaction with their travel experiences, this study suggests that port marketers could participate in several marketing activities such as advertising and promoting in tourism exhibition, organizing a cultural and music event, advocating higher service quality through stakeholders include travel agencies, cruise companies, airlines, hotels, restaurants, news, publication, magazine, etc.

Finally, this study found that tourist satisfaction played a key factor in fostering tourist loyalty. If tourists are satisfied with their travel experiences, they will be more likely to revisit a destination. This research provided empirical evidence supporting this hypothesis: tourist satisfaction was found to positively influence tourist loyalty. Higher degree of tourist satisfaction will lead to higher tourist loyalty, which increases tourists to visit Hong Kong again and recommend the destination to their family members and friends. Therefore, destination marketers should devote to foster a high level of tourist satisfaction via destination image so as to increase tourists' revisit behaviors and the development of port tourism market.

## ***5.2 Limitations and future research***

Despite this study contributes to the importance of aesthetics in destination tourism, however, several limitations are provided for the future research. First, having focused on the relationships between port aesthetics, destination image, tourist satisfaction, and tourist loyalty, this study neither considered tourists' perceived values (Chen and Tsai, 2007; Zeithaml, 1987) and motivations (Kirillova and Lehto, 2015) beyond a travel purpose nor accounted for a specific type of trips undertaken by respondents. Because a particular type of travel experiences (e.g. cultural tourism) would reflect greater attention to destination aesthetics than others, this factor could be a crucial information of variation in responses. Tourists' motivations and perceived values could be considered in the future research to explain tourist behavior.

Second, this research did not evidence the direct effects of port aesthetics on tourist satisfaction and loyalty, as well as the relationship between destination image and tourist loyalty. The subjective nature of aesthetic judgement at port could be differed from other destination aesthetics. Future researches could adopt the proposed model from this study to examine the influence of destination aesthetics on tourist loyalty in national park, cuisine, museum, hotel or restaurant.

Third, the research scope of the study was limited to the port aesthetics in Hong Kong, that is, respondents were focused on Star Ferry Pier located in Tsim Sha Tsui in Hong Kong. The similar study could be conducted in Singapore and Shanghai to justify the dimensions of port aesthetics. Fourth, another worthwhile direction for future research could apply the crucial dimensions of destination aesthetics identified in this study to other sectors, such as airport, national park, traditional railroad station, museum, etc. Despite its constraints, the study was confirmatory to identify port aesthetics measures and dimensions. It also provides the fundamental for future study in other sector fields and other countries.

Fifth, the investigation used in this research was static, i.e. the survey of respondents' perceptions was conducted at one point in time. Longitudinal research could be considered to examine how the change of tourists' perceptions of destination aesthetics, image, satisfaction, and loyalty over time. Finally, methodologically, a structural equation modeling analysis and confirmatory factor study were adequate to identify the relationships between variables and crucial dimensions of destination aesthetics. Possibly, other methods to assess the aesthetics, such as hierarchical regression analysis to examine the mediating and moderating effects of other factors could helpfully provide some features to explain tourist behavior.

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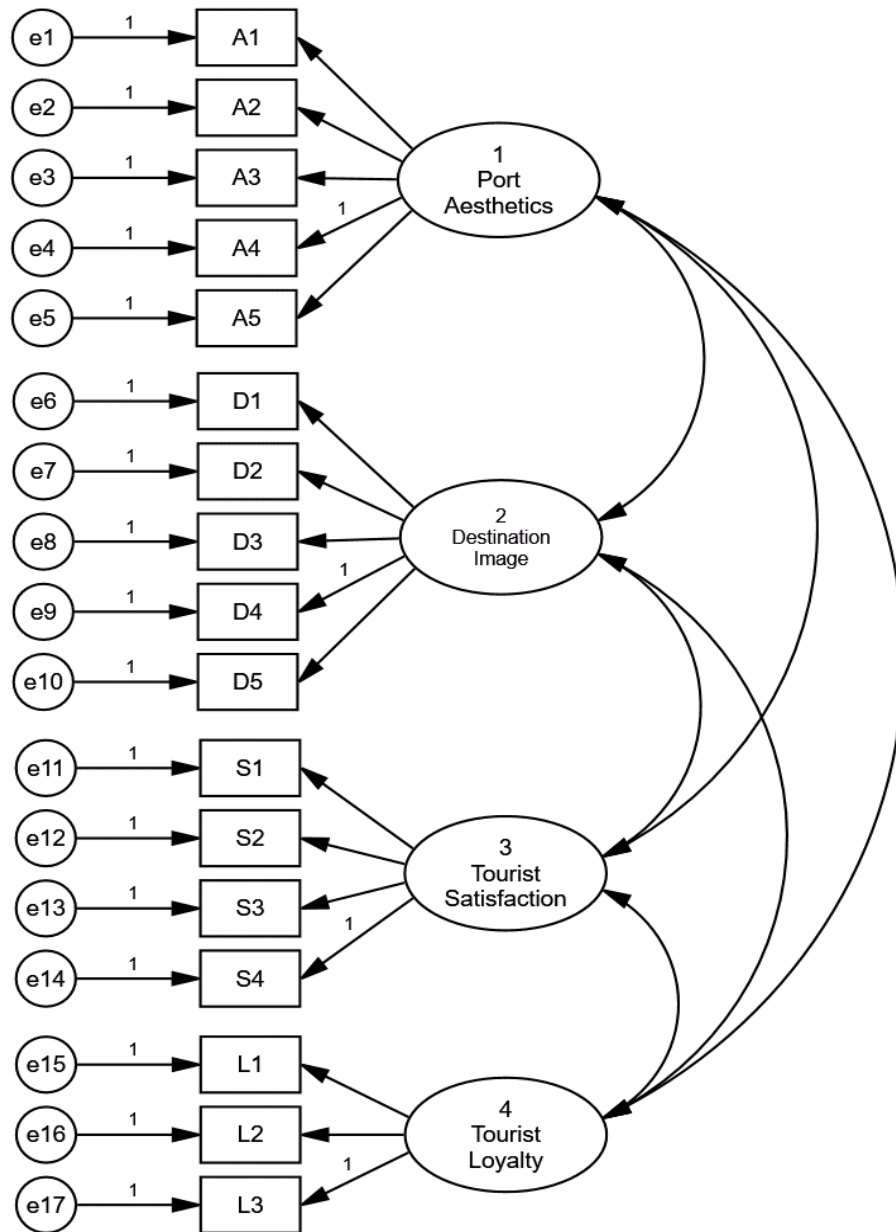


Figure 1. Path Diagram representing the measurement model.

Note:  $\chi^2 = 199.178$ ,  $df = 113$ ,  $\chi^2/df = 1.763$ ; CFI = 0.950; NFI = 0.893; GFI = 0.909; AGFI = 0.877; RMR = 0.02; RMSEA = 0.056.



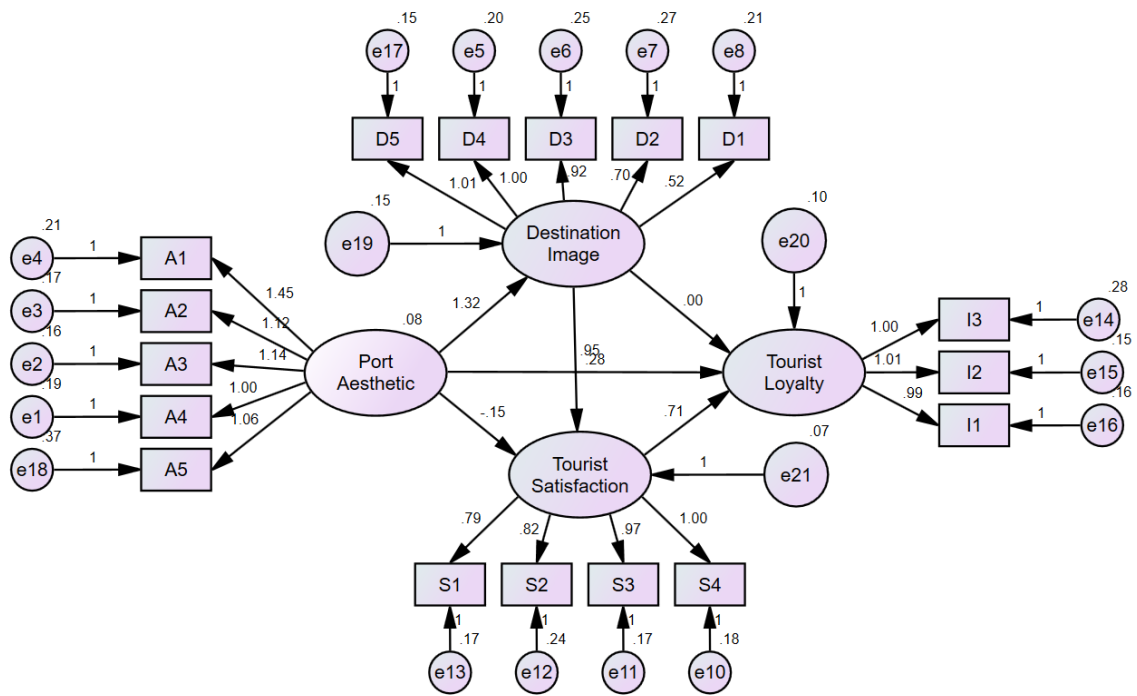


Figure 2. SEM model results.

Note: Chi-square = 199.178; Degree of freedom = 113; GFI = 0.909; AGFI = 0.877; CFI = 0.950; NFI = 0.893; RMR = 0.020; RMSEA = 0.056

Table 1. Profile of Respondents

<b>Demographics</b>	<b>Number of respondents</b>	<b>Percentage</b>
Gender		
Male	130	52.6
Female	117	47.4
<b>Frequency of visiting Star Ferry Port</b>		
Once	95	38.5
Twice	65	26.3
Three times	49	19.8
Four times and more	38	15.4
<b>Age</b>		
18 years or less	37	15.0
19-30 years	104	42.1
31-40 years	53	21.5
41 years or more	53	21.5
<b>Education</b>		
Secondary or elementary education	73	29.6
Tertiary education	76	30.8
Undergraduate education	67	27.1
Postgraduate education	31	12.6
<b>Income (HKD)</b>		
Less than \$5,000	74	30.0
\$5,001-\$10,000	34	13.8
\$10,001-\$20,000	46	18.6
\$20,001-\$30,000	64	25.9
Greater than \$30,000	29	11.7

Table 2. Respondents' level of agreement with port aesthetics, destination image, tourist satisfaction, and tourist loyalty measures regarding Hong Kong port.

Measures	Mean	SD
<b><i>Port aesthetics</i></b>		
The decorations and night scenery at the harbor (e.g. A Symphony of Lights)	3.93	0.66
An endless field of vision at the harbor	3.90	0.74
A spacious environment at the harbor	3.83	0.71
Recreational areas next to the harbors (e.g. Tsim Sha Tsui Promenade)	3.77	0.64
Festive activities are held near the harbor	3.74	0.72
Historic buildings in the harbor area	3.71	0.75
Shopping districts near the harbor	3.70	0.75
No disturbing noise within the harbor area	3.70	0.82
Hydrophilic trails near the harbor (e.g. Avenue of Stars)	3.69	0.67
The port facilities have artistic design (e. g. painting)	3.67	0.72
Feature restaurants near the harbor	3.67	0.79
Recreational facilities near the harbors (e.g. Hong Kong Cultural Centre)	3.67	0.66
Street artists performing around the harbor	3.66	0.76
Coffee shops and tea houses near the harbor.	3.64	0.77
Stylish hotels surrounding the harbor (e.g. The Peninsula Hong Kong)	3.61	0.74
Classic local snacks near the harbor	3.57	0.80
Social media check-in places or photo shoot areas in the harbor	3.50	0.68
<b><i>Destination image</i></b>		
Overall, I am impressed by the Hong Kong recreational harbors (D5)	3.84	0.67
Hong Kong recreational harbors have sightseeing value and high attractiveness (D4)	3.82	0.70
I think that the port has well-developed facilities (D1)	3.80	0.54
I think the surrounding environment of the port is glamorous (D2)	3.79	0.65
Through the travel experience to the Hong Kong recreational harbors, my impression about Hong Kong has been reinforced (D3)	3.77	0.71
<b><i>Tourist satisfaction</i></b>		
I felt joy and satisfaction after visiting the Hong Kong recreational harbors (S1)	3.90	0.60
The travel experience to the Hong Kong recreational harbors has fulfilled my expectation (S2)	3.81	0.61
I think that visiting the Hong Kong recreational harbors was a wise choice (S3)	3.75	0.68
Overall, the trip to the Hong Kong recreational harbors was well worth my time and money (S4)	3.70	0.69
<b><i>Tourist Loyalty</i></b>		
I would like to revisit Hong Kong recreational harbors in the future (L1)	3.81	0.67
I am willing to recommend Hong Kong recreational harbors to family and friends (L2)	3.79	0.67
Even if the time and cost required for visiting the Hong Kong recreational harbors are higher than for other places, I still prefer to visit Hong Kong (L3)	3.55	0.76

Table 3 Factor analysis of port aesthetics attributes

Aesthetics judgement attributes	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
<b>Leisure and culture (A1)</b>					
Coffee shops and tea houses near the harbor.	<b>0.820</b>	0.188	0.125	0.052	0.050
Classic local snacks near the harbor.	<b>0.768</b>	0.060	0.070	0.177	0.178
Feature restaurants near the harbor.	<b>0.718</b>	0.195	0.109	0.181	0.114
Shopping districts near the harbor	<b>0.676</b>	0.023	0.339	0.125	-0.099
<b>Design and cognition (A2)</b>					
An endless field of vision at the harbor.	0.046	<b>0.744</b>	0.146	0.126	-0.051
The port facilities have artistic design. (e.g. painted)	0.094	<b>0.655</b>	0.302	-0.027	0.310
No disturbing noise within the harbor sea.	0.375	<b>0.651</b>	-0.167	0.016	0.085
Historic buildings in the harbor area.	0.016	<b>0.604</b>	0.350	0.207	0.014
A spacious environment at the harbor.	0.405	<b>0.571</b>	0.046	0.141	-0.401
<b>Atmosphere (A3)</b>					
Festive activities are held near the harbor	0.111	0.027	<b>0.762</b>	0.111	0.008
The decorations and night scenery at the harbor (e.g. A Symphony of Lights)	0.172	0.262	<b>0.642</b>	-0.030	-0.368
Stylish hotels surrounding the harbor (e.g. The Peninsula Hong Kong)	0.020	0.265	<b>0.627</b>	0.147	0.288
Street artists performing around the port.	0.297	0.073	<b>0.586</b>	0.051	0.155
<b>Recreational facilities (A4)</b>					
Recreational areas next to the harbor (e.g. Tsim Sha Tsui Promenade).	0.140	0.051	0.029	<b>0.823</b>	-0.083
Hydrophilic trails near the harbor (e.g. Avenue of Stars).	0.116	0.095	0.046	<b>0.773</b>	0.165
Recreational facilities near the harbor (e.g. Hong Kong Culture Centre).	0.155	0.126	0.172	<b>0.707</b>	0.087
<b>Memories (A5)</b>					
Social media check-in places or photo shoot areas in the harbor.	0.294	0.105	0.133	0.181	<b>0.745</b>

Table 4. Confirmatory factor analysis results

Latent variable	Item	Unstandardized factor loading	Completely standardized factor loading	Standard error <sup>a</sup>	Critical ratio <sup>b</sup>	R <sup>2</sup> (item reliability)
1	A1	1.453	0.666	0.213	6.834	0.443
	A2	1.119	0.612	0.171	6.540	0.375
	A3	1.137	0.628	0.171	6.631	0.394
	A4	1.000	0.541	- <sup>c</sup>	-	0.293
	A5	1.064	0.445	0.201	5.296	0.198
2	D1	0.522	0.521	0.065	7.974	0.271
	D2	0.700	0.585	0.077	9.039	0.342
	D3	0.925	0.703	0.084	11.068	0.494
	D4	1.000	0.772	-	-	0.595
	D5	1.007	0.813	0.077	13.026	0.662
3	S1	0.794	0.726	0.067	11.880	0.527
	S2	0.823	0.678	0.075	10.943	0.459
	S3	0.974	0.795	0.073	13.257	0.633
	S4	1.000	0.796	-	-	0.634
4	L1	0.989	0.800	0.088	11.193	0.640
	L2	1.009	0.816	0.089	11.349	0.665
	L3	1.000	0.714	-	-	0.509

Note: Fit indices:  $\chi^2 = 199.178$ ,  $df = 113$ ,  $\chi^2/df = 1.763$ ,  $p < 0.01$ , GFI = 0.909, AGFI = 0.877, CFI = 0.950,

TLI = 0.941, RMR = 0.02, RMSEA = 0.056

a. S.E. is an estimate of the standard error of the covariance.

b. C.R. is the critical ratio obtained by dividing the estimate of the covariance by its standard error.

A value exceeding 1.96 represents a level of significance of 0.05.

c. Indicates a parameter fixed at 1.0 in the original solution.

Table 5. Means, standard deviation, correlation, squared correlations, composite reliability, and average variance extracted (AVE) among constructs

	Mean <sup>a</sup>	S.D. <sup>b</sup>	Construct reliability <sup>c</sup>	1	2	3	4
1. Port aesthetics	3.67	0.39	0.717	<b>0.584<sup>d</sup></b>			
2. Destination image	3.80	0.49	0.813	0.564** (0.318) <sup>e</sup>	<b>0.687</b>		
3. Tourist satisfaction	3.79	0.54	0.840	0.429** (0.184)	0.715** (0.511)	<b>0.754</b>	
4. Tourist loyalty	3.71	0.60	0.821	0.411** (0.169)	0.589** (0.347)	0.660** (0.436)	<b>0.778</b>

Note:

\*\*Correlation is significant at the 0.01 level

a. The mean scores of tourist loyalty, tourist satisfaction, destination image and port aesthetics

b. S.D. = standard deviation

c. Internal consistency of the reflective constructs

d. The square root of the AVE value between the constructs is provided in bold type.

e. Squared correlation

Table 6. Summary of SEM results

Research Hypotheses	Estimates( $\beta$ )	S.E.	Critical Ratio	Result
H1: Port Aesthetics → Destination Image	0.69**	0.132	5.286	Supported
H2: Port Aesthetics → Tourist Satisfaction	-0.08	0.152	-0.472	Not Supported
H3: Destination Image → Tourist Loyalty	0.00	0.395	-0.061	Not Supported
H4: Destination Image → Tourist Satisfaction	0.93**	0.226	6.282	Supported
H5: Tourist Satisfaction → Tourist Loyalty	0.72**	0.225	3.906	Supported
H6: Port Aesthetics → Tourist Loyalty	0.14	0.202	1.607	Not Supported

Note: S. E: estimate of the standard error the covariance

\*\* The level of significance is less than 0.01.