

A MODEL FOR MANAGING STANDARDIZATION OF CRUISE PORT ATTRIBUTES INFLUENCING CRUISE PASSENGER SATISFACTION TOWARD POSITIVE WORD-OF-MOUTH: THE GSCA APPLICATION APPROACH

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Abstract

With a significant growth rate within the cruise business, not only do cruise lines need to develop, but cruise ports must also accelerate development to support the growth of the cruise industry. This research aims to examine and analyze a model for managing the standardization of cruise port attributes which influence cruise passenger satisfaction and positive word-of-mouth. The study utilizes a quantitative research technique, gathering information from a sample of 465 respondents using questionnaires. GSCA Pro software version 1.1.6 was used to analyze the data that were gathered. The research findings sum up the importance of cruise port attributes, in terms of the perceived standardization of cruise ports that affect the levels of satisfaction and intention toward positive word-of-mouth, from the cruise passenger perspective. From the results of the study, 5 sub-components of being a cruise port are identified as basic factors in increasing satisfaction levels; these include: (1) Port Service Provider, (2) Port Accessibility, (3) Port Environment, (4) Passenger Port Building, and (5) Passenger Transportation in the Port. All five factors were found to affect the intention to spread positive word-of-mouth. Thus, these five elements are the basic elements for setting standards in the cruise port management model. Executives and cruise port managers will be able to utilize the cruise port attributes that have been found in order to effectively and successfully construct and design a model for managing the standardization of cruise ports in the passengers' point of view. Meanwhile, scholars may use this set of attributes to study in conjunction with other elements in subsequent studies. Based on this paradigm, this concept and model has the potential for further development in the future.

Keywords: Standardization, Cruise Port, Satisfaction, Word-of-Mouth, GSCA

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INTRODUCTION

According to Kizielewicz (2012) and UNWTO (2012), cruise tourism is a special kind of tourism that combines transportation, accommodation, and destination. Multifunctional and interdisciplinary components are included, such as onboard entertainment, facilities, infrastructure, and onshore activities (Gibson, 2006). Cruise tourism has been identified by many studies as a travel segment that prioritizes both onboard facilities and onshore activities alongside enjoyment and safety (Dowling, 2006; European Commission, 2009; Gibson, 2006; Kizielewicz, 2012; Ogawa et al., 2009; Rungroueng & Monpanthong, 2023b; UNWTO, 2012; Willis, 2012). Passengers are transported from the homeport (starting point) to visit any scheduled ports of call.

Cruise tourism has evolved over the past 20 years into a continually improving industry of travel-related businesses and services. The cruise industry became more well-known in 1960, and was very well-liked in America and Europe by 1990 (Liu, 2006). With a rising number of tourists participating in cruises each year, this kind of tourism business has become increasingly important. Additionally, according to predictions made by the Cruise Lines International Association, or CLIA, the number of cruise tourists would reach 32 million by 2024 (CLIA, 2020). The quality of the services provided, and the reputation of the cruise industry are important factors that influence this growth. Other elements that draw tourists include luxury, a unique style, convenience, worthiness, safety, a variety of tourist attractions, and an exciting experience. The cruise industry benefits not only cruise lines but also various destination stakeholders as cruise tourists visit many destinations, resulting in employment opportunities and income distribution (Jones, 2011).

For more than 30 years, the global cruise industry has grown steadily. Since 2009, more than 10 million passengers, or 70% of all cruise passengers, have come from North America, making North American tourists the primary clientele. Additionally, the demand for cruise passengers has increased, particularly in Asia, Europe, and Australia. Cruise tourism has grown significantly during the past ten years, according to a report from the Cruise Lines International Association, or CLIA. The number of cruise passengers increased from 17.9 million to 28.5 million between 2009 and 2018, a growth of 60%, surpassing that of terrestrial tourism (CLIA, 2019a).

Upon comprehensive examination of each country, it is evident that the United States of America continues to be the source of the greatest number of passengers. Australia and Chinese travelers have the most potential to increase cruise tourism. At the moment, a growing number of Chinese travelers are becoming curious about cruise tourism. China accounted for over 2.4 million of the world's cruise passengers in 2019, making China the second-highest source of cruise tourists globally. Meanwhile, Australian cruise passengers are growing at a rapid pace; in 2019, they accounted for approximately 1.34 million passengers, placing them fifth in the globe (CLIA, 2019a).

These customers have an impact on the cruise industry as a whole, including the size, primary objective, route, ports, cost, length, goods and services, and shore excursions. The cruise industry is growing at a substantial rate. Numerous countries are concentrating on tangible improvements in the administration of the cruise industry in each of their own countries, in order to meet the growth rate and seize opportunities against rivals in the business, for instance, specifying policy, development plans, and accountability. It is also necessary to develop many compositions including ports, infrastructure, and other facilities, even tourism products and services.

Cruise tourism is the newest and fastest-growing travel industry in Asia. The Cruise Lines International Association, or CLIA, reports that from 2012 to 2019, there was a growing demand for cruise tourism, with an increase from 777,500 to 4.02 million individuals,

representing a 419% growth rate. It was the largest cruise tourism industry with the fastest growth in tourism (CLIA, 2019b). Furthermore, it has been predicted that the number of travelers taking cruises in Asia will rise from 1.8 million to 3million by 2030 (UNWTO, 2016). In addition, although Asia's growth rate has been modest when compared globally, it has been quite strong during the past three to five years. Asia has a great potential to boost its cruise passenger count due to its large population and growing economy. Singapore aims for 1.2 million cruise visitors to visit its ports annually. Meanwhile China has developed six enormous new ports to facilitate the expansion of international cruise lines that have been increasingly focusing on Asia as their destination. Hong Kong is also creating more ports (UNWTO, 2016). Numerous premium cruise lines are attempting to bring their ships into Asia as a result of the growing trend of cruise tourism. Given the current actions of several Asian countries, there is potential in the cruise tourism business.

Because of Asia's development, SEA and ASEAN are now well-known cruise destinations, significantly increasing port rivalry. According to CLIA (2016), as a result, ASEAN nations have expanded the range of services they offer in their ports to accommodate an increasing number of major cruises. Subsequently, a number of major cruise lines, including Silver Sea, Star Cruises, Costa, Princess, Celebrity, Seabourn, and Royal Caribbean International (RCCL), have decided to expand their operations throughout ASEAN. Singapore's Port, also known as the Turn-around Port or Home Port, serves as the major port for a number of prominent countries, including Indonesia, Vietnam, Malaysia, and Thailand. Due to its excellent transit system and wide range of attractions, the Singapore Port can accommodate many more cruise ships.

It is apparent that cruise passengers recognize ASEAN cruise tourism to be quite popular, and many countries in the region are competing to become the hub of the region's cruise tourism industry. Thailand still has potential to be a route for top-tier cruise businesses in the future, given the current status of cruise tourism worldwide. For more than 30 years, Thailand has provided cruise services, originating in small cruises carrying guests during the tourism peak season. Initially, there weren't many cruises offered during each season. Later, the Star Cruises company arrived with passengers and made port calls at Laem Chabang, Samui, and Phuket. Concurrently, many businesses began organizing their travel itinerary in Thailand (Monpanthong, 2015). According to a CLIA analysis, there has been a consistent increase in cruise tourism in Thailand from 2014 to 2019. A 28% increase in cruise docks in Thai ports occurred between 2014 and 2015, however 2016 saw a 22% decrease. Still, the number increased by 75% between 2016 and 2017. Thailand, which can accommodate nearly 624,000 people, was scheduled as a cruise destination 509 times in 2017, with over 3.5 billion baht earned by the country from cruise tourism alone. Phuket Port and Laem Chabang Port are the principal ports (CLIA, 2017). In terms of its capacity to accommodate cruise passengers, Thailand was placed third in Asia in 2018 with 581 cruise dockings—a 14% increase from 2017. In comparison, Laem Chabang supported 149 cruises, with over 67 of those docking overnight, and Phuket supporting over 219 cruises. Among Thailand's ports, Phuket has the highest use (CLIA, 2017). Nevertheless, growth dropped by 5% in 2019 due to political unrest and the status of the economy (CLIA, 2019b).

In conclusion, even though ports which can support huge international cruises are absent in Thailand, the country itself is attractive enough for cruises passing by to make a stop. This reflects the traveling potency around the Laem Chabang, Phuket, and Samui port areas. If there is further port development, it will attract more cruises and improve passengers' satisfaction in the future, leading to increased income. Therefore, having solid principles for developing cruise tourism, that include all important key factors and cooperation from as many related organizations as possible is a crucial and essential matter at hand, leading to this

research to examine and analyze a model for managing the standardization of cruise port attributes which influence cruise passenger satisfaction and positive word-of-mouth.

LITERATURE AND RELATED THEORY REVIEW

The literature review shows that the variables of cruise port attributes directly influence the positive word-of-mouth of cruise passengers, as influenced through cruise passenger satisfaction which motivates cruise passengers towards positive word-of-mouth. Therefore, a total of 3 research hypotheses are established as follows:

Research Hypothesis 1

Cruise Port Attributes (CPA) have a Positive Influence on Cruise Passenger Satisfaction (CPS)

Measurement scales have been utilized for assessing visitor satisfaction, but a more contemporary approach is to measure satisfaction by examining visitors' personal narratives. It's uncertain if a company's financial condition can be made or broken by customer satisfaction. Pre- and post-exposure attitudes form the foundation of this theory. The degree to which one is pleased or disappointed with a product's perceived performance in relation to expectations is known as satisfaction. Customers' satisfaction levels with a product are determined by its functionality, whereas pre-purchase assessments are also linked to functionality. Cruise lines obtain higher ratings for the environment in which the service is rendered as well as the individual attention passengers receive. Elevated contentment or satisfaction generates an emotional connection with the company and can lead to a high level of positive customer referrals.

A review of the literature in the context of tourism and hospitality reveals that, in the case of a restaurant, customer and visitor satisfaction with the overall level of service at a specific location is determined by a number of factors, including environmental factors, food quality, and service quality components (Muskat et al., 2019; Mustelie-Puig et al., 2018; Praditbatuga et al., 2022; Suwannakul & Khetjenkarn, 2022; Vö, 2021; Wang et al., 2017). This is similar to cruise tourism, which characterizes the standard of services on a cruise ship, the atmosphere, and the physical surroundings, which all have a significant effect on how satisfied passengers are overall (Forgas-Coll et al., 2015; Lee et al., 2017; Rungroueng, 2020, 2023a, 2023b; Rungroueng & Monpanthong, 2021; Shahijan et al., 2018).

Furthermore, research by Sanz-Blas, Carvajal-Trujillo, et al. (2017) considered how the standards of Mediterranean ports of call influenced favorable word-of-mouth. According to Chua et al. (2017b), who examined quality in all three domains—interactional quality, physical environment quality, and outcome quality—which are sub-components of quality attributes), satisfaction has a significant mediating effect on positive word of mouth. This is similar to studies by Wu et al. (2018) and Chua et al. (2017a) which determined the qualitative aspects that had an impact on cruise passengers' overall satisfaction.

Therefore, the aforementioned components have been applied to the cruise port attributes, which directly affect cruise passenger satisfaction. This literature was also used to set the research hypothesis 1.

Research Hypothesis 2

Cruise Port Attributes (CPA) have a Positive Influence on Positive Word-of-Mouth (PWOM)

The three processes of perception are emotions, interpretation, and selection. Percep-

tion is the process of organizing or interpreting components that lend meaning to the surrounding environment. The evaluation of experiential pleasure based on the contrast between performance and expectations is linked to the impression of quality. Quality attributes are determined by asking customers to recollect different parts of their entire experience with a product in order to assess its overall excellence or superiority.

According to Lu et al.'s (2015) investigation on the relationship between positive word-of-mouth and quality attributes in the restaurant setting, customers' future decisions are influenced by their perception of the environment of the establishment (Rattanaburi, 2023). The study's findings support the systematic transmission of relationships and are in line with research on the impact of services on word-of-mouth conducted by Mustelier-Puig et al. (2018) and Jiang (2019). These findings also support the relationship previously mentioned.

Furthermore, research on cruise services and physical environmental elements that influence passengers' intentions to spread positive word of mouth have been conducted in the context of cruise tourism (Lee et al., 2017; Shahijan et al., 2018). Research findings verify the statistically significant associations' transmission.

Therefore, both service and atmosphere, which are considered port components, are related to the behavioral intentions of cruise passengers to have a positive word of mouth and are the primary factors for research hypothesis 2.

Research Hypothesis 3

Cruise Passenger Satisfaction (CPS) has a Positive Influence on Positive Word-of-Mouth (PWOM)

Satisfaction is a mediator and has a positive effect on positive WoM, while it's unclear if every part of the scenario has a mediating role. Positive WoM is highly correlated with actual behavior and has diagnostic value. Jaccard and King (1977) defined positive WoM as a sense of self-connection to an action. Positive intentions include factors such as loyalty, switching-intent, readiness to pay more, positive WoM, and internal and external responses.

Numerous investigations have examined and evaluated the links between behavioral intention variables, such as intentions to recommend, intentions to revisit, intentions to spend more, and intentions to engage in positive word-of-mouth, as well as overall satisfaction in the context of tourism and hospitality. The study's findings, which showed a substantial relationship between behavioral intentions and overall satisfaction, support this theory. The relationship between behavioral intentions and overall satisfaction has led to definitive research (Ahn & Back, 2019; Ali et al., 2018; Chua et al., 2017a, 2017b; Forgas-Coll et al., 2015; Gohary et al., 2018; Hallak et al., 2018; Han et al., 2019; Han & Hyun, 2018; Hanafiah et al., 2019; Lee et al., 2017; Meng et al., 2011; Muskat et al., 2019; Mustelier-Puig et al., 2018; Oviedo-Garcia et al., 2019; Rungroueng, 2015, 2016; Rungroueng & Suveatwatanakul, 2015a, 2015b; Sanz-Blas & Buzova, 2016; Sanz-Blas, Buzova, et al., 2017; Sanz-Blas et al., 2019; Sanz-Blas, Carvajal-Trujillo, et al., 2017; Shahijan et al., 2018; Wang et al., 2016; Wang et al., 2017; Wu et al., 2018).

Therefore, this research has the main objective to apply the knowledge gained from the study to affirm cruise port attributes on the development of cruise tourism in Thailand in order to encourage cruise passengers to engage in positive word of mouth. Studying the relationships within the research objectives will help to develop understanding of the cruise port attributes within Thailand cruise tourism and to predict passengers' positive WoM in the future, as measured by cruise passenger satisfaction which leads to positive WoM. Therefore, the positive WoM of cruise passengers is defined as the dependent variable for evaluating research hypothesis 3 according to the above studies.

RESEARCH METHODOLOGY

Population and Sample

The demographic under study consists of Thai (who speak English) and international cruise passengers who board at Laem Chabang port, travel overnight, and transit or turnaround within Thailand. Data from Thais who have cruised and used Laem Chabang as a homeport or port of call—a memorable experience group—were gathered during the COVID-19 pandemic period in which data from international sources could not be gathered. In order to be able to respond to any queries, researchers distributed questionnaires to the sample group themselves. Group operators and shipping agents were also used. Data collection took place online or on-site, dependent on circumstances.

CILA annual reports (CLIA, 2014, 2016, 2017, 2018a, 2019b) were used to gather details regarding possible locations in Thailand. Laem Chabang Port, Phuket Port, and Samui Port are the top 3 ports in terms of docking. In consideration of the selected research criterion, Laem Chabang port is the only port with all necessary port infrastructure, including passenger port buildings, and the only port where cruise ships may dock directly at the port.

To determine the appropriate sample size for the infinite population in this research where Partial Least Squares - Structural Equation Modeling or PLS-SEM was used, it was necessary to focus on defining a sample size which would lead to the possibility of static study results (Baggio, 2011). The sample size for equation analysis is defined to be at least 100-200 or more (Hoyle, 1995; Kline, 2016). Moreover, for PLS-SEM, regulations define the appropriate sample size as 10 times the number of indicators of the biggest independent variable in the model (Barclay et al., 1995; Gefen et al., 2000). When considering the equation of Cohen quoted in Cunningham & McCrum-Gardner (2007), and Faul et al. (2009) through the G*power program with Linear Multiple Regression: Fixed model, the R^2 deviation from zero clarifies 3 levels of effect size (Cohen, 1988), which define the α error probability and power of $1-\beta$ error probability as 0.05 and 0.95. Here the number of predictors is 5 following the study method. Therefore the analysis result yields an appropriate sample size of 74 (Wiratchai, 2012) which matches Barclay et al. (1995); Gefen et al. (2000); Hair et al. (2011); Hair Jr et al. (2013); Hoyle (1995); Kline (2016); and Marcoulides and Saunders (2006). Therefore, the sample size was defined as 200 which is higher than any minimum size from any calculation method. Data were received from 465 respondents, such that the sample size was greater than the determined minimum amount.

Because the population is infinite, the sampling strategy used in this study was non-probability sampling using an incidental or handy sampling approach (Sangpikul, 2013). Two questions were created as a basic scan to ensure that every respondent satisfied the standards and matched the target group for the study.

Survey Instrument

The research tool employed for this quantitative study was a questionnaire produced following the pertinent theories, concepts, and research, which was reviewed and broken down into the following three parts:

Part 1: Cruise Port Attributes (CPA) has been conceived as a first-order multidimensional formative construct and as a second-order formative one. CPA as perceived by the passengers was operationalized as a higher order formative construct adapted from a validated scale. The CPA scale comprises five latent factors: (1) Port Service Provider, adapted from multiple studies (Chua et al., 2015; Chua et al., 2017; Forgas-Coll et al., 2015; Jiang, 2019;

Kwortnik, 2008; Lee et al., 2017; Lyu et al., 2017; Ma et al., 2018; Muskat et al., 2019; Mustelier-Puig et al., 2018; Sanz-Blas, Carvajal-Trujillo, et al., 2017; Satta et al., 2015; Shahijan et al., 2018; Tao & Kim, 2019; Wu et al., 2018); (2) Port Accessibility, adapted from Ma et al., (2018), Whyte, (2017), and Wu et al., (2018); (3) Port Environment, adapted from multiple studies (Cardenas-Garcia et al., 2016; Chua et al., 2015; Chua et al., 2017; Kwortnik, 2008; Lyu et al., 2017; Muskat et al., 2019; Sanz-Blas, Carvajal-Trujillo, et al., 2017; Satta et al., 2015; Whyte, 2017; Wu et al., 2018); (4) Passenger Port Building, adapted from multiple studies (Cardenas-Garcia et al., 2016; Chua et al., 2015; Chua et al., 2017; Lyu et al., 2017; Muskat et al., 2019; Sanz-Blas, Carvajal-Trujillo, et al., 2017; Satta et al., 2015; Tao & Kim, 2019; Whyte, 2017; Wu et al., 2018); and (5) Passenger Transportation in Port, adapted from multiple studies (Cardenas-Garcia et al., 2016; Ma et al., 2018; Satta et al., 2015; Tao & Kim, 2019; Whyte, 2017; Wu et al., 2018). The five factors (attributes) were measured using 36 attribute items (observed variables) in a closed-ended questionnaire, using 8-point Likert scales.

Part 2: Cruise Passenger Satisfaction (CPS) was conceived as a reflective construct adapted from a validated scale. CPS was measured in terms of overall satisfaction based on a five-item scale in a closed-ended questionnaire, using an 8-point Likert scale adapted from multiple studies (Ali et al., 2018; Chua et al., 2015; Chua et al., 2017; Forgas-Coll et al., 2015; Han et al., 2019; Lee et al., 2017; Mustelier-Puig et al., 2018; Oviedo-Garcia et al., 2019; Sanz-Blas & Buzova, 2016; Sanz-Blas, Buzova, et al., 2017; Sanz-Blas, Carvajal-Trujillo, et al., 2017; Wu et al., 2018).

Part 3: Positive Word-of-Mouth (PWoM) has been conceived as a reflective construct adapted from a validated scale. PWoM was measured in terms of the intention to recommend based on a five-item scale in a closed-ended questionnaire, using an 8-point Likert scale adapted from multiple studies (Ahn, 2019; Ahn & Back, 2019; Ali et al., 2018; Chua et al., 2015; B. L. Chua et al., 2017; Forgas-Coll et al., 2015; Gamez et al., 2019; Gohary et al., 2018; Hallak et al., 2018; Han et al., 2019; Jiang, 2019; Kang et al., 2016; Lee et al., 2017; Muskat et al., 2019; Mustelier-Puig et al., 2018; Oviedo-Garcia et al., 2019; Sanz-Blas & Buzova, 2016; Sanz-Blas, Buzova, et al., 2017; Sanz-Blas et al., 2019; Sanz-Blas, Carvajal-Trujillo, et al., 2017; Shahijan et al., 2018; Toudert & Bringas-Rabago, 2016; Wu et al., 2018; Zhang et al., 2018).

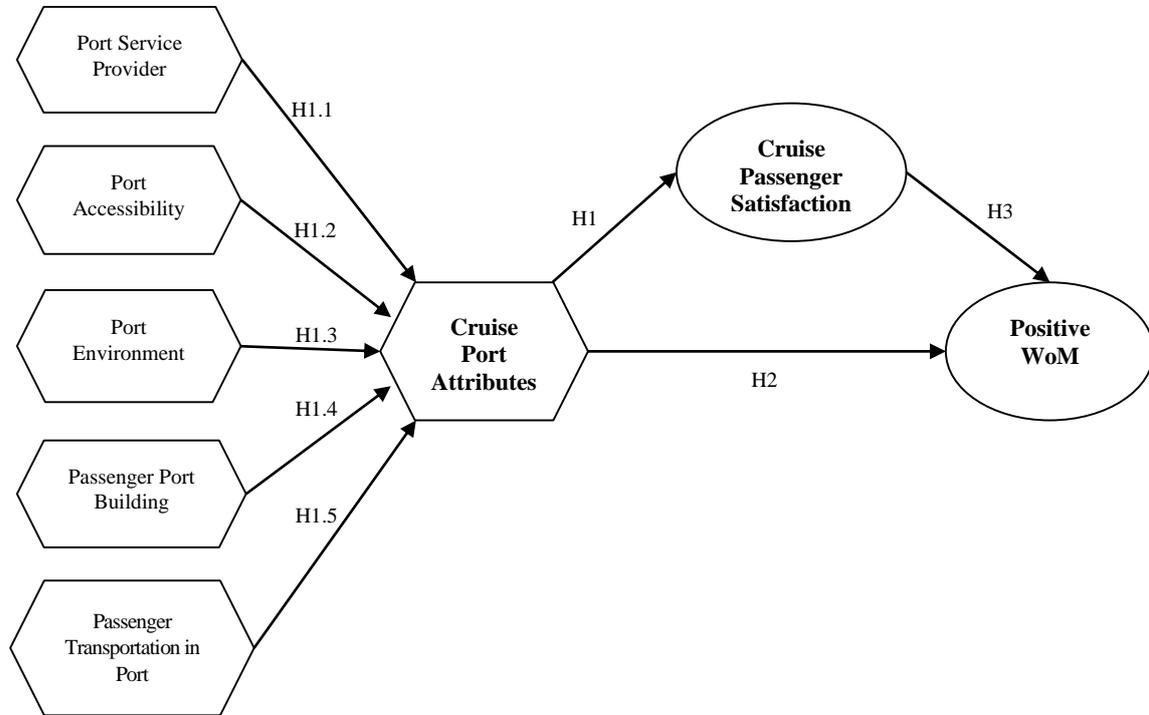
Data Analysis

The model for this study was evaluated using Generalized Structured Component Analysis (GSCA) (Hwang & Takane, 2004); the structural equation model was analyzed using GSCA Pro 1.1.6 software (Hwang et al., 2021). This software is widely used in the academic community (Khanngoen et al., 2023; Napontun et al., 2023; Napontun & Senachai, 2023), because it is an unbiased estimator in comparison to other comparable methods when the model contains factors and components (Leruksa et al., 2023; Manosuthi et al., 2022a, 2022b). This technique has recently gained more traction from researchers (i.e. Kumsura et al., 2024; Napontun et al., 2024; Rasmidatta, 2023; Satitsamitpong et al., 2024; Senachai et al., 2023) studying tourism and hospitality (Hwang et al., 2021; Manosuthi et al., 2021a, 2021b).

Construct validity was evaluated using convergent validity, which requires that each criterion has a factor loading of at least 0.7 (Hair Jr et al., 2020), and an average variance extracted (AVE) greater than 0.5 (Fornell & Larcker, 1981), as well as discriminant validity, which is measured by the Heterotrait-Monotrait ratio of correlations (HTMT), which should be less than 0.85 (Chumwichan et al., 2023; Henseler et al., 2015), and both convergent and discriminant validity. According to the recommendation of Hair Jr et al. (2020), the model fit indices were also analyzed to ensure that each criterion had a standardized root mean square

residual (SRMR) < 0.08. The statistical significance was also evaluated, and Bootstrapping was used to impact the path size at a 95% confidence level.

Figure 1 Conceptual Research Framework



RESULTS

Demographic Characteristics of the Sample

Most respondents were female (266 or 57.2%), while 162 were male (34.8%), 21 were LGBTQ+ (4.5%) and 16 (3.4%) declined to answer, responding N/A. The age group of 18-40 years old had the most respondents, totaling 431 (92.7%). The nationality (regional) of most respondents was Asia, with 457 respondents (98.3%) (See Table 1).

Table 1 Analysis Results of the Demographic Data of Respondents

Characteristic	Number	Percent
Gender		
Male	162	34.8
Female	266	57.2
LGBTQ+ (Alternative gender)	21	4.5
N/A	16	3.4
Total	465	100
Age		
18-40 (Generation Z and Y)	431	92.7
41-55 (Generation X)	29	6.2
56-74 (Baby Boomer)	5	1.1
Above 74 (Silent Generation)	-	-
Total	465	100

Table 1 (Continued)

Characteristic	Number	Percent
Nationality (Regional)		
Europe	4	0.9
Asia	457	98.3
Africa	1	0.2
North America	1	0.2
South America	2	0.4
Total	465	100

Results of the Analysis of Construct Validity

Internal consistency was assessed using Dillon-Goldstein's Rho, with the criterion of yielding a value greater than .7 indicating high reliability, as recommended by Hwang and Takane (2014). Results showed that all variables within the structure were highly consistent, with Rho values ranging from .94 to .976. Convergent validity was assessed by calculating the Average Variance Extracted (AVE) with a recommended threshold of .5, as suggested by Manosuthi et al. (2021a, 2021b). The results indicated that the instrument used in this study had good convergent validity, with AVE values ranging from .713 to .876, (CPA1 = 0.817, CPA2 = 0.839, CPA3 = 0.820, CPA4 = 0.713, CPA5 = 0.812, CPS = 0.876, PWoM = 0.806). Construct validity was assessed through factor analysis, which grouped similar questions into the same variable. The criterion for factor loading was set at .7 or greater, as recommended by Hair Jr et al. (2020). Results showed that all factors were highly related, with factor loading values greater than .7. The goodness of fit of the structural model was evaluated using the Goodness of Fit Index (GFI) and Standardized Root Mean Square Residual (SRMR), with recommended criteria of .9 and .08, respectively, as suggested by Hu and Bentler (1999). Results yielded a GFI value of .997 and SRMR of .034, indicating a good fit of the model. Discriminant validity was assessed using the Heterotrait-Monotrait ratio of correlations (HTMT) with a recommended threshold of less than .85, as suggested by Henseler et al. (2015). Results showed that all variables had HTMT values less than .85, ranging from .553 to .83, except CPA2 ↔ CPA5, which was 0.878, and which was deemed acceptable, indicating good discriminant validity overall. Following this examination, it was concluded that the measurement model had acceptable construct validity (Fornell & Larcker, 1981; Hair Jr et al., 2020; Henseler et al., 2015) as shown in Table 2.

Table 2 Analysis Results of Construct Validity Testing

Item	X	SD	Loadings	Weights for 1st order components	Weights for 2nd order components	95% CI	AVE	CR
1st order components								
Cruise Port Attributes (CPA)								
<i>Port Service Provider (CPA1)</i>							0.817	0.921
CPA1.1	5.938	1.364	0.889	0.115		0.105 0.126		
CPA1.2	5.927	1.355	0.923	0.138		0.126 0.149		
CPA1.3	6.022	1.379	0.928	0.131		0.119 0.142		
CPA1.4	6.004	1.312	0.921	0.123		0.112 0.133		
CPA1.5	5.925	1.292	0.918	0.112		0.101 0.124		

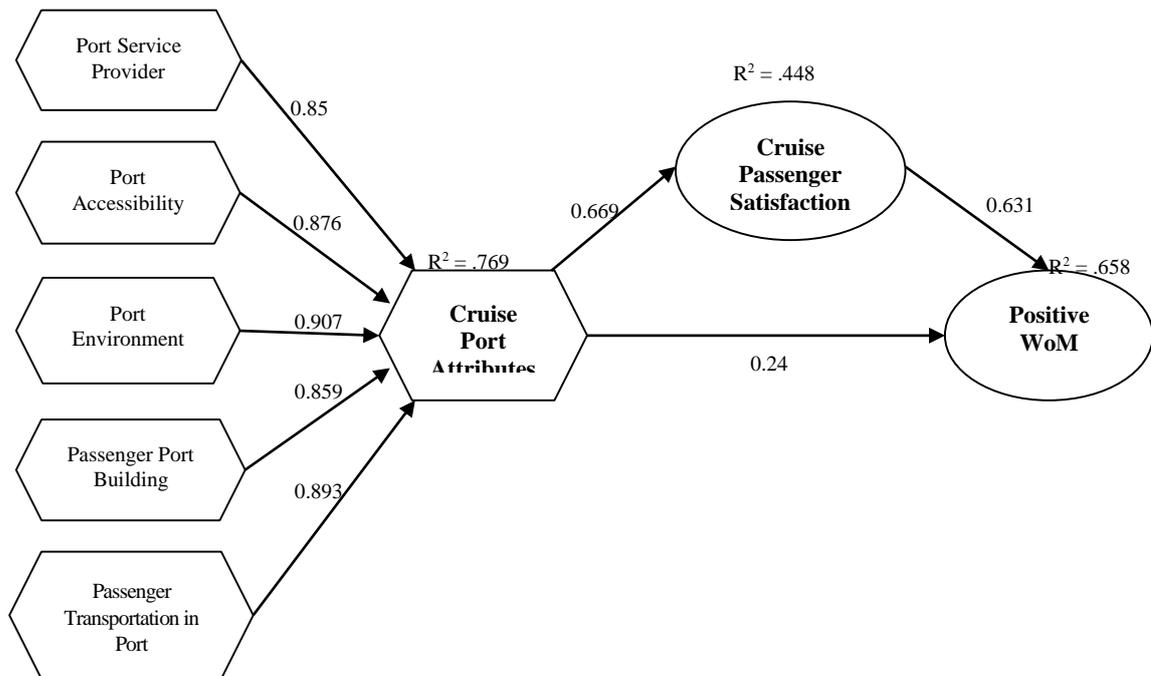
Table 2 (Continued)

Item	X	SD	Loadings	Weights for 1st order components	Weights for 2nd order components	95% CI	AVE	CR
CPA1.6	6.075	1.346	0.928	0.129		0.118 0.139		
CPA1.7	5.935	1.355	0.91	0.121		0.112 0.13		
CPA1.8	6.082	1.381	0.87	0.117		0.11 0.124		
CPA1.9	5.888	1.371	0.845	0.121		0.113 0.128		
<i>Port Accessibility (CPA2)</i>							0.839	0.418
CPA2.1	5.785	1.398	0.905	0.388		0.369 0.409		
CPA2.2	5.74	1.469	0.928	0.338		0.316 0.365		
CPA2.3	5.923	1.479	0.916	0.365		0.336 0.387		
<i>Port Environment (CPA3)</i>							0.820	0.847
CPA3.1	5.731	1.545	0.901	0.157		0.144 0.17		
CPA3.2	5.871	1.414	0.906	0.149		0.138 0.159		
CPA3.3	5.987	1.383	0.91	0.165		0.153 0.176		
CPA3.4	5.578	1.629	0.87	0.153		0.142 0.165		
CPA3.5	5.755	1.491	0.928	0.158		0.146 0.172		
CPA3.6	5.931	1.383	0.915	0.168		0.158 0.179		
CPA3.7	5.759	1.364	0.911	0.154		0.14 0.169		
<i>Passenger Port Building (CPA4)</i>							0.713	0.970
CPA4.1	5.512	1.507	0.805	0.087		0.081 0.094		
CPA4.2	5.929	1.348	0.83	0.09		0.083 0.098		
CPA4.3	5.83	1.444	0.856	0.095		0.087 0.102		
CPA4.4	5.37	1.616	0.834	0.083		0.076 0.089		
CPA4.5	5.796	1.402	0.879	0.096		0.089 0.104		
CPA4.6	5.181	1.738	0.772	0.084		0.077 0.091		
CPA4.7	5.557	1.529	0.839	0.094		0.086 0.102		
CPA4.8	5.576	1.476	0.856	0.086		0.08 0.094		
CPA4.9	5.731	1.42	0.89	0.091		0.083 0.098		
CPA4.10	5.516	1.538	0.848	0.09		0.083 0.098		
CPA4.11	5.718	1.417	0.898	0.097		0.088 0.105		
CPA4.12	5.787	1.456	0.838	0.091		0.084 0.099		
CPA4.13	5.856	1.395	0.83	0.099		0.092 0.107		
<i>Passenger Transportation in Port (CPA5)</i>							0.812	0.571
CPA5.1	5.757	1.457	0.899	0.273		0.255 0.292		
CPA5.2	5.662	1.497	0.879	0.26		0.244 0.277		
CPA5.3	5.828	1.449	0.924	0.293		0.274 0.313		
CPA5.4	5.637	1.445	0.902	0.283		0.264 0.301		
<i>Cruise Passenger Satisfaction (CPS)</i>							0.876	0.717
CPS1	6.024	1.274	0.921	0.214		0.188 0.241		
CPS2	6.153	1.299	0.939	0.21		0.18 0.24		

Table 2 (Continued)

Item	X	SD	Loadings	Weights for 1st order components	Weights for 2nd order components	95% CI	AVE	CR
CPS3	6.198	1.287	0.947	0.221		0.193 0.249		
CPS4	6.209	1.316	0.932	0.218		0.184 0.249		
CPS5	6.265	1.304	0.943	0.205		0.171 0.239		
<i>Positive WoM (PWoM)</i>							0.806	0.692
PWoM1	6.077	1.436	0.884	0.229		0.205 0.252		
PWoM2	6.034	1.406	0.863	0.214		0.193 0.236		
PWoM3	6.006	1.41	0.917	0.204		0.175 0.236		
PWoM4	6.024	1.413	0.918	0.248		0.222 0.274		
PWoM5	5.961	1.398	0.908	0.217		0.193 0.241		
2nd order components								
CPA								
Port Service Provider (CPA1)					0.24	0.216 0.266		
Port Accessibility (CPA2)					0.231	0.203 0.261		
Port Environment (CPA3)					0.246	0.216 0.279		
Passenger Port Building (CPA4)					0.201	0.179 0.225		
Passenger Transportation in Port (CPA5)					0.221	0.194 0.25		

Figure 2 Results of the hypothesis testing using GSCA



Results of the Structural Analysis of the Model and Hypothesis Testing Results

The model yielded satisfactory fit indices. Overall, the model explained 76.9% of all variation as indicated by the FIT score of 0.769. Additionally, around 79.5% of variation within the measurement models was explained by their indicators (FITm = 0.795). Likewise, 61.9% of the model structure could be explained by all variables (FITs = 0.619). The analysis result for the model fit indices found that the standardized root mean square residual value (SRMR) was 0.034. The investigation showed that the measurement model has a good model fit. The investigation of the structural path coefficients shown in Figure 2, indicates that the results support the eight hypotheses. Additional investigation indicated that Port Service Provider ($\beta = 0.85$), Port Accessibility ($\beta = 0.876$), Port Environment ($\beta = 0.907$), Passenger Port Building ($\beta = 0.859$), and Passenger Transportation in Port ($\beta = 0.893$), together predict 76.9% of the variation in the Cruise Port Attributes. In addition, Cruise Port Attributes ($\beta = 0.669$) can predict 44.8% of the variation in Cruise Passenger Satisfaction. Furthermore, Cruise Port Attributes ($\beta = 0.24$) and Cruise Passenger Satisfaction ($\beta = 0.631$) can together predict 65.8% of the variation in Positive WoM.

Path coefficients

Table 3 and Figure 2 present the results of the path coefficients at the 95% confidence interval for the structural equation model. The research findings indicate that path coefficients are statistically significant for all path model relationships.

Cruise Port Attributes (CPA) had a positive influence on Cruise Passenger Satisfaction (CPS) ($\beta = 0.669$, 95% CI = 0.589 - 0.743, SE = 0.039, $P < .05$), supporting hypothesis 1 (H1). In addition, Port Service Provider (CPA1), Port Accessibility (CPA2), Port Environment (CPA3), Passenger Port Building (CPA4), and Passenger Transportation in Port (CPA5) were found to have a positive influence on Cruise Port Attributes (CPA), supporting hypotheses H1.1 ($\beta = 0.85$, 95% CI = 0.794 - 0.895, SE = 0.026, $P < .05$), H1.2 ($\beta = 0.876$, 95% CI = 0.843 - 0.905, SE = 0.016, $P < .05$), H1.3 ($\beta = 0.907$, 95% CI = 0.881 - 0.928, SE = 0.012, $P < .05$), H1.4 ($\beta = 0.859$, 95% CI = 0.811 - 0.897, SE = 0.022, $P < .05$), and H1.5 ($\beta = 0.893$, 95% CI = 0.86 - 0.919, SE = 0.015, $P < .05$). Moreover, Cruise Port Attributes (CPA) were found to have a positive influence on Positive WoM (PWoM) ($\beta = 0.24$, 95% CI = 0.12 - 0.354, SE = 0.06, $P < .05$), supporting hypothesis 2 (H2). Furthermore, Cruise Passenger Satisfaction (CPS) was found to have a positive influence on Positive WoM (PWoM) ($\beta = 0.631$, 95% CI = 0.509 - 0.754, SE = 0.062, $P < .05$), thus supporting hypothesis 3 (H3).

Further analysis of the indirect effects revealed that the paths of the Cruise Port Attributes variable had a significant influence on the mediator variable (Cruise Passenger Satisfaction), resulting in an indirect effect on Positive WoM as shown in Table 3.

Table 3 Results of the Hypothesis Testing Based on GSCA

		Estimate	SE	95%CI		Results
H1.1	CPA → CPA1	0.85	0.026	0.794	0.895	Supported
H1.2	CPA → CPA2	0.876	0.016	0.843	0.905	Supported
H1.3	CPA → CPA3	0.907	0.012	0.881	0.928	Supported
H1.4	CPA → CPA4	0.859	0.022	0.811	0.897	Supported
H1.5	CPA → CPA5	0.893	0.015	0.86	0.919	Supported
H1	CPA → CPS	0.669	0.039	0.589	0.743	Supported
H2	CPA → PWoM	0.24	0.06	0.12	0.354	Supported
H3	CPS → PWoM	0.631	0.062	0.509	0.754	Supported
Indirect effect	CPA → CPS → PWoM	0.240	0.060	0.120	0.354	Supported

DISCUSSION

The purpose of this study was to examine the attributes of cruise ports which affect cruise passenger satisfaction, leading to positive word-of-mouth from cruise passengers, ultimately resulting in the expansion of knowledge and understanding through the development and empirical analysis of a model for managing the standardization of cruise ports.

In accordance with the study's findings and the literature evaluation, cruise passengers will perceive the quality of the standardization of a cruise port through their experience of past perception and comparing this experience with their expectations to evaluate their level of satisfaction by measuring in various attributes. In addition, the level of cruise passenger satisfaction affects behavioral intentions in terms of positive word-of-mouth. Therefore, the model for managing the standardization of cruise ports was constructed from the following five significant attributes including (1) Port Service Provider, (2) Port Accessibility, (3) Port Environment, (4) Passenger Port Buildings, and (5) Passenger Transportation in Port, supported by Rungroueng and Monpanthong (2023a). This study measured the perception of cruise passengers through the mediating effect of cruise passenger satisfaction towards the positive word-of-mouth of the cruise passengers.

This research found that Cruise Port Attributes (CPA) have a positive influence on Cruise Passenger Satisfaction (CPS). In the context of tourism and hospitality, and specifically in the context of a restaurant, the literature review found that service factors, environmental factors, and the quality of the components in various aspects such as food quality, resulted in overall satisfaction with the service at a particular location among customers and tourists (Muskat et al., 2019; Mustelier-Puig et al., 2018; Wang et al., 2017). In the context of cruise tourism, which describes the quality of services on a cruise ship, atmosphere, as well as the physical environment, also significantly affect overall passenger satisfaction (Forgas-Coll et al., 2015; Lee et al., 2017; Shahijan et al., 2018). Similarly, this study showed an influence of Cruise Port Attributes on Passenger Satisfaction supporting research hypothesis 1.

In addition, this research demonstrates that the Cruise Port Attributes (CPA) have a positive influence on Positive WoM (PWoM). Likewise, in the study of the relationship between perceived quality and behavioral intentions, in the context of restaurants, Lu et al. (2015) studied the relationship between customers' perception of the restaurant atmosphere and their decision to visit the restaurant in the future. The results of the study confirmed the systematic transmission of relationships, consistent with the studies of Mustelier-Puig et al. (2018) and Jiang (2019) which studied the influence of services that affect word of mouth. In addition, in the context of cruise tourism, there are studies of cruise services and the physical environmental factors that affect tourists' behavioral intentions to revisit and have a positive word of mouth (Lee et al., 2017; Shahijan et al., 2018). The results of the research confirm the transmission of relationships with statistical significance. Moreover, studies from Sanz-Blas, Carvajal-Trujillo, et al. (2017) showed that the quality of ports of call in the Mediterranean had an effect on revisitation and positive word-of-mouth. Thus, the research results reconfirm research hypothesis 2, which is supported by the work of Jiang (2019); Lee et al. (2017); Lu et al. (2015); Mustelier-Puig et al. (2018); and Shahijan et al. (2018).

Furthermore, research hypothesis 3 stated that Cruise Passenger Satisfaction (CPS) has a positive influence on Positive WoM (PWoM). The research findings showed support for this assumption. Numerous studies in the context of tourism and hospitality have studied and tested the relationships of overall satisfaction and behavioral intentions, in terms of intentions to recommend, intentions to revisit, and intentions to spend more, among others. The results of this study have a similar indication, finding that overall satisfaction and behavioral intentions were significantly related. The influence of overall satisfaction on behavioral intentions results in a clear study (Ahn & Back, 2019; Ali et al., 2018; Chua et al., 2017a, 2017b; Forgas-Coll et

al., 2015; Gohary et al., 2018; Hallak et al., 2018; Han et al., 2019; Han & Hyun, 2018; Hanafiah et al., 2019; Lee et al., 2017; Meng et al., 2011; Muskat et al., 2019; Mustelier-Puig et al., 2018; Oviedo-Garcia et al., 2019; Sanz-Blas & Buzova, 2016; Sanz-Blas, Buzova, et al., 2017; Sanz-Blas et al., 2019; Sanz-Blas, Carvajal-Trujillo, et al., 2017; Shahijan et al., 2018; Terason et al., 2022; Wang et al., 2016; Wang et al., 2017; Wu et al., 2018). Additionally, The results showed that satisfaction is an important mediating effect on revisitation and positive word of mouth, in line with Chua et al. (2017) who studied quality in all 3 areas: interactional quality, physical environment quality, and outcome quality, which are the sub-components of perceived quality. Quality was found to affect the overall satisfaction of cruise passengers as in the studies of Wu et al. (2018) and Chua et al. (2017) on the influence of perceived quality on overall satisfaction.

Therefore, this research can sum up the importance of cruise port attributes, in terms of perceptions of the standardization of cruise ports from the cruise passenger perspective, which affects their level of satisfaction, and therefore intentions to perform positive word-of-mouth. Positive word of mouth is another tool for expanding the customer base. From the results of the study, 5 sub-components of being a cruise port are basic factors in increasing satisfaction levels; these include: (1) Port Service Provider, (2) Port Accessibility, (3) Port Environment, (4) Passenger Port Building, and (5) Passenger Transportation in Port. All five sub-components were found to affect the intention to spread positive word-of-mouth. Thus, these five elements are the basic elements for setting standards in a cruise port management model.

CONCLUSION

Theoretical Implications

Through the perspectives of cruise passengers, this study reaffirms the attributes of standardization for cruise ports. This combines similar components that have been investigated before (Ma et al., 2018; Sanz-Blas, Carvajal-Trujillo, et al., 2017; Satta et al., 2015; Tao & Kim, 2019; Whyte, 2017; Wu et al., 2018) with the discovery of new indicators as a consequence of this study. This contributes to the research's conceptual comprehensiveness by enabling it to fill in and validate gaps in the attributes of standardization for cruise ports left by previous studies. Meanwhile, scholars may use this set of attributes to study in conjunction with other elements in subsequent studies.

Theoretical applications must also be kept up to date, and analytical data techniques can be used to support this goal. GSCA software can be used to concurrently detect influences, paths, and relationships. Consequently, there may be a drop in the error value. Based on this paradigm, this concept and model has the potential for further development in the future.

Managerial Implications

It is important to be aware of the important variables that cruise passengers take into account when embarking and disembarking at a port. This can be determined based on the examination of the aspects that affect behavioral intentions in terms of positive word-of-mouth. Executives and tourism managers of cruise lines and ports will be able to utilize the cruise port attributes that have been found in order to effectively and successfully construct and design a model for managing the standardization of cruise ports from the passengers' point of view. The research also comprised an analysis of customer touchpoints and visitor perspectives. The study's conclusions therefore might also serve as a reference for creating plans, strategies, and policies that will assist port regions to develop each necessary feature.

The research findings could also be utilized to evaluate the level of significance for each advancement of Thailand's cruise ports and function as a template for other cruise destinations concerning which features ought to be developed initially or last to optimize advantages while minimizing expenses. This may result in building a group of new customers while also keeping old customers, thus developing an opportunity for the destination in welcoming back passengers.

FUTURE RESEARCH

Tourism destinations play a significant role in the composition of cruise tourism, in addition to the elements of the cruise ports. The continuing development of cruise tourism destinations will become even more evident if studies are conducted regarding the components of what makes a good destination for cruise passengers. Research gaps remain regarding the components of a good cruise tourism destination. By combining the aspects of the attributes of the standardization of cruise ports, this study allows for the integration of these attributes with the features of good cruise tourism destinations, bringing both concepts together. This can then be used as a roadmap for future development of cruise tourism, which would be beneficial to all parties concerned.

In addition, mixing these two components—ports and destinations—and investigating them from the viewpoint of cruise passengers is fascinating. Including various methods of study in order to augment and enhance the research findings, through both quantitative and qualitative data gathering techniques or mixed methodologies research (Rungroueng et al., 2016; Rungroueng & Charoenbut, 2019), can be used in future investigations. Along with other pertinent concerns, such future research can help in the development of effective and suitable service procedures.

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