

Causal factors relationship of tourism experience influencing customer loyalty via the perceived service value, attraction image and overall service quality satisfaction for the museum tourist attractions: Evidence in Thailand

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Abstract

This study explores the evolving role of museums in Thailand as dynamic platforms for public education and tourism development. Originally established to enhance public knowledge beyond traditional academic institutions, museums now serve as critical nodes in the tourism industry. The research aims to analyze the perspectives of museum visitors and service recipients to develop practical guidelines for improving museum operations and positioning them as regional tourism assets within ASEAN. An exploratory quantitative approach was adopted, involving 856 tourists who visited six museums across Thailand. Participants were selected using quota and convenience sampling based on service area proportions. Data were collected through online questionnaires accessed via QR code and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The model demonstrated a high level of empirical consistency, with customer loyalty (CULYT) explaining 87.4% of the outcome variance at a significance level of 0.05. Key findings indicate that tourist experience (TRESP) significantly influences service value perception (SERVQ), management quality (TRMGR), and satisfaction (SATIS), all of which positively impact CULYT. These insights contribute to strategic recommendations for enhancing museum management and transforming museums into competitive and sustainable tourism destinations across the ASEAN region.

Keywords: Museum tourism, Perceived value, Tourist satisfaction, Customer loyalty, Thai museum.

Introduction

Museums are open for the general public to enter into and participate in promoting diversity and sustainability (International Council of Museums, 2022). With the role of museums, the primary duties are concerned with the storage, preservation and transmission of knowledge of various subjects that have value in learning as a birthplace of ideas, creativity and innovation for the development of the people in society. However, in an age when economic and social contexts are constantly changing and becoming increasingly complex, museums have become part of the social management system aimed at addressing public issues. They also play a role in social development through their capacity to transmit important narratives within the economic and social systems via the museum sector (ICOM, 2019; ShawHong, 2020; Srisuk, Chanthasaro and Rujjanapan, 2022). Moreover, as a source of services in museum tourism, museums must respond to tourism businesses and the tourism industry (ShawHong, 2020; Srisuk et al., 2022; Vesci et al., 2021). In particular, during the past few years, there has been the appearance of the concepts of sustainability management in various types sectors. As a result, museums must take action in order to receive feedback and opinions and apply them to the process of operations so as to respond by the objectives of the management (Moreno-Mendoza, Santana-Talavera and Boza-Chirino, 2020).

Furthermore, due to being places that offer tourism services that have an impact on the creation of the experiences of the service recipients or tourists, and despite offering museum tourism and being not-for-profit organizations that have the objective to conduct research on knowledge, museums are not an exception in the expectations that influence Tourist Experience: (TREXP), in which it is expected that the experiences will have some equivalence with other services that are excellent and luxurious, for example high-quality hotels, tourism, and services (Kim, Park and Xu, 2020; Koc, 2021; Tu, Hsu and Creativani, 2022). Various studies point out the issues involving the management of museums which most museums were established under local government mission as non-profit organizations to collect and preserve community resources.

To support the occurrence of change in the management and lead museums to implement management that supports tourism in order to provide the ability to create revenue for the museum.

They must appropriately adjust the performance guidelines and methods of their operations for integration with the costs or the specific context of the area (Pholsim and Suriya, 2023; Ada, Pirnar and Altin, 2022). This can provide museums with the ability to become an effective economic driver in learning and tourism, which are both important. With regard to the problems related to the status of museums in Thailand, it was found that because of a lack of understanding and a lack of awareness, both the public as well as government agencies and related supporting agencies consider that museums are merely a location that stores or exhibits items based on the objectives of those museums (Phrakhusirithammabandit et al., 2023). Also, the operations of museums include various problems and limitations, especially in the marketing management of museums that is not in the guidelines and components of conventional museum management, and this lack of guidelines regarding approaches also results in an inability to develop potential and the expansion of the roles of museums in order to be an efficient mechanism for tourism and economic improvement (Pholsim and

Suriya, 2023; Ada et al, 2022; Piancatelli, Massi and Vocino, 2020). As a result of this research, the objectives were to explore, based on the guidelines, marketing management by investigating the opinions of visitors and the recipients of the services of museums in Thailand to reach conclusions and identify guidelines that can be applied to museum operations and result in the enhancement of operational performance to support being a part of tourism and the tourism industry and formulate recommendations for utilization to improve the management of the museum sector that must aim to further develop into tourist attractions.

Literature Review

Museum Tourism and Thai Museums

In the definition of ‘museum’ from the International Council of Museums (2022), emphasis is placed on the principles and the duties of being a not-for-profit organization of museums. In Thailand, during the past few years, there has been an increase in museums, and the majority of studies consider this as one of the important factors in driving the growth of the tourism, creativity and culture industries starting with receiving support from the government of Thailand in the year 2004, which saw the establishment of the Thailand Creative and Design Center (TCDC) to improve the creative economy of the country (ShawHong, 2020), promote Thailand to Southeast Asia as the creative industry hub of ASEAN (Punpeng, 2021) and have an impact on the development of museums in Thailand moving toward new horizons (Thailand New Horizon). As the data of The Princess Maha Chakri Sirindhorn Anthropology Centre (2022) indicated, since the year 2000 until the present, in the database report of museums in Thailand, it was found that there are more than 1,574 museum locations, including “New Generation Museums” as many locations opened operations quickly under various forms of cooperation and to improve the growth of the cultural sector and support tourism, such as the Museum Siam (2007), Bangkok Art and Culture Centre (2008), Rattanakosin Exhibition Hall (2010), the National Science Museum’s Science Square (2010), the ASEAN Cultural Centre (2015), and the Rama IX Museum (2019) that can be considered as the largest museum in Southeast Asia and receives more than one million visitors per year (Royal Thai Embassy, Washington D.C., 2019). In summary, during more than two decades in the past, the tourism industry of Thailand has created significant social and economic impacts on the sustainable development of tourism through museums and created locations that have a unique identity for the cultural heritage of Thailand.

Tourist Experience (TREXP)

Museum tourism and the travel experiences of tourists (TREXP) result from the accumulation of knowledge from the tourism factors and environment of this type of tourist destination. However, the factors contributing to tourism and museum tourism were found to be increasingly important and complex, particularly in their influence on the accumulation of knowledge and experiences (Kim et al., 2020). In particular, the characteristics of the accumulation of knowledge and experiences that lead to the expectations of the service recipients or tourists are characterized by comparison with past experiences and comparison with other sources of service when both services are in the same category or are of similar type (Koc, 2021; Piancatelli et al., 2020).

Therefore, the recipient of the services or the tourists will have expectations of experiences that have equivalence with more expensive services (Kim et al., 2020).

Nonetheless, regarding their experiences of participating in various activities, they expect to be able to gain access to those products or services easily and receive a response to any issues or questions quickly (Carlson et al., 2019; Meeprom and Silanoi, 2020).

Based on the research on marketing management in the context of museums, it was found that the empirical evidence of TREXP shows a direct influence on TRMGR, SERVQ and SATIS and an influence on CULYT (Vesci et al., 2021; Piancatelli et al., 2020). Thus, the indicator factors of TREXP were investigated, namely: (1) experiences in marketing and public relations such as obtaining information about the services of the museum (EXP01), (2) experiences involving the time needed for providing museum services when compared with other attractions (EXP02), (3) experiences involving the process or the procedure for providing museum services when compared with other attractions (EXP03), (4) experiences involving staff who provide museum services when compared with other attractions (EXP04), and (5) experiences related to technology and innovation in the providing of museum services when compared with other attractions (EXP05) (Piancatelli et al., 2020).

Service Value Customer Perception (SERVQ)

Tourist destination image management, especially in terms of museums, emphasizes the importance of being tourist attractions in the Creative Economy Culture and the Business of Creativity (Agbisit, 2021; Piancatelli et al., 2020). The literature also reveals that perception of the overall quality and image value (SERVQ) is the issue that leads to SATIS and has an impact on CULTY in terms of being a tourist destination (Nguyen et al., 2021), which provide empirical evidence that the satisfaction of tourists (SATIS) is the mediator in the relationship between perceived value (SERVQ) and customer loyalty (CULTY) of destinations and confirms that exhibition management, both small and large-scale, should be seen as an important part of a marketing strategy that aims to improve quality, image, value, satisfaction, and loyalty (Agbisit, 2021). The indicator factors of the SERVQ of museum services were examined, namely: (1) awareness of using time for the highest benefits (SPE1), (2) awareness of the easy access to museum services and the ability to visit frequently (SPE2), (3) awareness of the attractiveness, enjoyability and entertainment of museum services (SPE3), (4) perception toward up-to-date knowledge that is in line with needs in the present (SPE4), (5) awareness of the effective safety measures against infectious diseases of museum services (SPE5) and (6) perception toward the availability of the variety of learning materials of museum services (SPE5) (Piancatelli et al., 2020; Nguyen et al., 2021). The study of various marketing theories agree with the findings that the empirical data of TREXP has a positive influence on value, perception, and the image of museum tourism destinations (SERVQ). Hence, the model also shows the expectations of direct and indirect impacts on the SATIS of museum-oriented tourists (Ghorbanzadeh, Shabbir, Mahmood and Kazemi, 2021). From the studies above, the further research hypothesis can be established as follows.

- H1** Tourist Experience (TREXP) has a positive effect on Service Value Customer Perception (SERVQ).

Management of Tourist Potential and Attractions Image (TRMGR)

The various literature support the empirical data regarding TRMGR, which is defined as the management of the potential tourism and destination image that are caused by the introduction of the influences as the input factors, namely TREXP and SERVQ, to management in order to lead to the creation of efficiency in the outcomes regarding the SATIS of customers or the recipients of the services and have an impact on the creation of CULYT (Charoensook, 2017; Phrakhusirithammabandit et al., 2023)

As for the study of the indicator factors of TRMGR of the museum services, by relying on the concepts of the SERVPERF model that was developed by Cronin and Taylor in the year 1992, a measure of the quality of services was developed to reduce the expectations that people have with regard to the quality of services that may result in bias from the SERVQUAL model concept of Parasuraman et al. (1988). Furthermore, the method to evaluate the quality of services that are assessed from TREXP and SERVQ, which will have an impact on CULYT, comprises five dimensions, namely Tangible: Amenities and Facilities, Reliability: Information Sources, Responsiveness: Accessibility, Assurance: Quality of Displays/Exhibitions, and Empathy: Customer Service.

Moreover, from the study also found that attraction image has no direct influence on loyalty. Because customers can recognize that it is a commercial image, not a real situation (Najib, 2020).

The development of the indicator factors for this study, namely (1) overall price management of museum services (Price Management: PM), (2) overall management of the amenities and facilities of the museum (Amenities and Facilities Management: AF), (3) overall management of the quality of displays/exhibitions of the museum (Quality of Displays/Exhibitions Management: QD), (4) overall management of the access to the museum (Museum Accessibility: MA) (5) overall management of the information sources of the museum (Information Sources: IS), and (6) overall management of the providing of services by museum staff (Customer Service Management: CS). In summary, TREXP and SERVQ affect TRMGR (Jeong and Kim, 2020; Moreno-Mendoza et al., 2020). and from these studies, the following research hypotheses can be established.

- H2** Tourist Experience (TREXP) has a positive effect on Management of tourist potential and attractions image (TRMGR).
- H3** Service Value Customer Perception (SERVQ) has a positive effect on Management of tourist potential and attractions image (TRMGR).

Overall Service Quality Satisfaction (SATIS)

The study of SATIS focuses on the measurement of the outcomes regarding how satisfied the customers are with what they have received from using the services (Mohd-Ridzuan et al., 2022). These concepts include the long-term development, and it is accepted in the management sector that the quality of services reveals the gap that occurs between the expectations of customers and the actual efficiency of the services, according to concept of SERVQUAL of Parasuraman et al. (1988).

As for this relationship, it is followed by the concepts that established the origin of marketing management in which it is proposed that SERVQUAL defines SATIS as the gap that occurs between the expectations and experiences of customers and the service recipients (TREXP) and the perception of the overall quality and image value (SERVQ) leads to an understanding of the satisfaction of customers and the service recipients (SATIS) (Chikazhe et al., 2021). Thus, the SERVQ of these special activities are held to be the important factors in the development of sustainable relationships with those people participating in activities or the recipients of these services. Availability of SERVQ at a high level will result in SATIS, and due to the perceived value of experiences at a higher level and a tendency to review the level of TREXP, support will be given to the behavior related to CULYT (Chikazhe et al., 2021; Jeong and Kim, 2020). The various literature supports the empirical data regarding TRMGR that defines the management of the image of tourist attractions (destination image), and studies found that the creation of CULYT must be developed to provide SERVQ that will have an effect on the creation of the loyalty behavior (Phrakhusirithammabandit et al, 2023). For the study of the indicator factors of the SATIS of museum services, the following indicator factors were studied, namely: (1) How does the use of services or visiting this museum overall create positive experiences for you? (SL1), (2) How is the overall service quality of the museum? (SL2), and (3) How is your overall satisfaction with the receiving of the services of the museum? (SL3) (Mohd-Ridzuan et al., 2022; Nguyen et al., 2021). Moreover, from the research results above, further research hypotheses can be established as follows.

- H4** Tourist Experience (TREXP) has a positive effect on Overall Service Quality Satisfaction (SATIS).
- H5** Service Value Customer Perception (SERVQ) has a negative effect on Overall Service Quality Satisfaction (SATIS).
- H6** Management of Tourist Potential and Attractions Image (TRMGR) has a positive effect on Overall Service Quality Satisfaction (SATIS).

Customer Loyalty (CULYT)

The study of marketing gives importance to CULYT through various aspects that have an impact on the behaviors of loyalty, love, appreciation, and retention of customers or the recipients of services. In particular, CULYT in the business practices of the service sector (Tu et al., 2022; Jeong and Kim, 2020), where CULYT represents the deep bond between the service providers and the service users, affects the loyalty behavior that customers show toward brands or services that is defined through their intention to travel somewhere repeatedly or return to use services repeatedly (revisit intention) or communication through word-of-mouth (WOM), which refers to talking about good experiences that one has had with friends, relatives, family members, coworkers, or other people and giving recommendations to them or other people to use those services or purchase those products (Vesci et al., 2021; Detsaro, Seeyong and Jansri, 2022; Mohd-Ridzuan et al., 2022). After customers experience satisfaction from using goods and services, leading to the development of in-depth, beneficial knowledge, they are likely to return for repeated use. This behavior impacts operations and contributes to the organization's competitive advantage (Nurul and Putra, 2013). This study examined

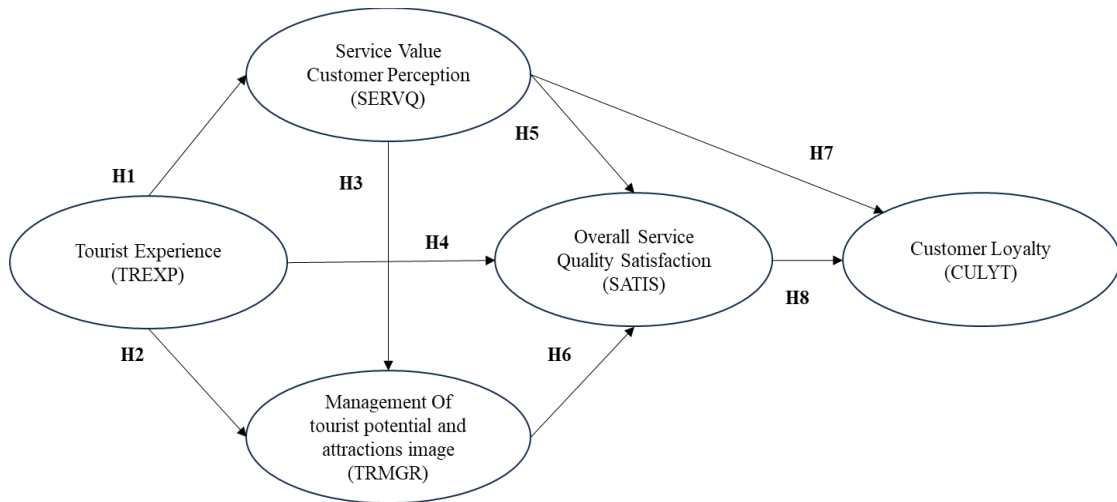
the indicator factors of the CULYT of museum services, namely (1) intention and returning to use services or touring the museum repeatedly (BI45), (2) speaking of their impressions about the museum to other people (BI44), and (3) willingness to recommend the museum to other people (BI43) (Vesci et al., 2021; Mohd-Ridzuan et al., 2022; Detsaro et al., 2022).

The various studies conducted on CULYT agree that it receives a positive influence from SERVQ and SATIS. The studies of Jeong and Kim (2020) and Chikazhe et al. (2021) also show that perception of the quality of the overall quality and image value (SERVQ) is the issue that results in a direct influence on CULYT and has an indirect influence through SATIS on CULYT in terms of being a tourist destination and can lead to management guidelines that should be seen as part of a marketing strategy that aims to improve the quality of the image value satisfaction and has an impact on the loyalty of the service recipients or tourists, which is consistent with the research of Charoensook (2017), Tu et al. (2022), Phrakhusirithammabandit et al. (2023), and Mohd-Ridzuan et al. (2022). However, the study of Chikazhe et al. (2021) points out issues resulting from the use of the structural equation model and regression analysis as even though they indicate that SATIS has a direct positive influence on CULYT, it has an indirect influence through SERVQ on CULYT as well. Furthermore, it was found that the ambiguous relationship between SERVQ and SATIS is impacted by the personal characteristics factor of the sample group and the objectives, and the researcher must determine the sample group so as to further investigate both the relationship between the factors and the relationship on the level of the loyalty of the customers and service recipients. Thus, from the literature above, further research hypotheses can be established as follows.

- H7** Service Value Customer Perception (SERVQ) has a positive effect on Customer Loyalty (CULYT).
- H8** Overall Service Quality Satisfaction (SATIS) has a positive effect on Customer Loyalty (CULYT).

Research Framework

From the data from previous literature, the conceptual framework of the research can be summarized as follows (Figure 1).

Figure 1: Research framework

Methodology

Population and Sampling Design

This study used a sample of 856 participants from the service recipients who traveled for tourism and/or used products or various service projects in the service areas of museums in six locations of Thailand with the method for segmentation of the group using Quota Sampling and Accidental Sampling based on the proportion of the museum area where services are provided and specified two periods of time for data collection between February and July 2023. The profile data of the sample group of the respondents to the questionnaire, the service recipients that travel for tourism and/or use products or various service projects in the services areas of museums, are shown in Table 1.

Table 1: Profile of respondents (n = 856)

Category	Description	Frequency	Percentage
Museum	Science Museum	108	12.62
	Natural Science Museum	104	12.15
	Information Technology Museum	112	13.08
	King Rama IX Museum	115	13.43
	Science Square, The Street Ratchada	211	24.65
	Science Square, Chiang Mai	206	24.07
Group type	One person	64	7.48
	Group of less than 5 people	443	51.75
	Group from 6–10 people	165	19.28
	Group of more than 10 people	184	21.50
Gender	Male	339	39.60
	Female	517	60.40
Age (years)	18–22 years	285	33.29
	23–40 years	333	38.90
	41–60 years	224	26.17
	60 years and above	14	1.64

Category	Description	Frequency	Percentage
Education	Primary	11	1.29
	Lower secondary/ Upper secondary/Equivalent	296	34.58
	Bachelor's degree	466	54.44
	Higher than a bachelor's degree	83	9.70
	No income	286	33.41
Monthly Income	≤ 15,000 baht	126	14.72
	15,001–30,000 baht	151	17.64
	30,001–50,000 baht	227	26.52
	50,001–100,000 baht	57	6.66
	> 100,000 baht	9	1.05
	First time	493	57.59
Number of times using the services or visiting the museum	2–3 times	270	31.54
	> 3 times	93	10.86
	< 1 hour	26	3.04
Average time spent	1–3 hours	450	52.57
	3–5 hours	277	32.36
	> 5 hours	103	12.03

From Table 1 summarizing the data of the factors of the service recipients who travel for tourism and/or use products or various service projects in the service areas of museums, the total number of respondents was 856 people. The majority of the sample group had the following characteristics: Group of ≤ 5 people (51.75%) or group from 6 and up (40.78%), Gender: 60.40% were female, Age: in the range of 23–40 years (38.90%), followed by the age group of 18–22 years (33.29%), Education: most had the level of bachelor's degree (54.44%) and lower secondary/upper secondary/equivalent (34.58%), Monthly Income: the groups having no income (33.41%) and 30,001–50,000 baht/month (26.52%) were highest, Number of times they have ever received services or visited the museum: most were first-time visitors (57.59%) followed by more than one time (42.41), and regarding Average time spent: 52.57% specified that it was in a range of 1–3 hours per visiting or sightseeing one time.

Measures and Data Collection

In the study, there were eight multiple-choice questions for identification of personal data. The tool for the evaluation of the components is based on the process of quantitative research and used 23 questions in the questionnaire with a 5-point Likert scale that was modified based on the preliminary literature review. The questionnaire was developed and tested through the process to investigate the quality of the tool, including Proof of Exemption from the Ethical Review Subcommittee for Human Research in Science, Humanities and Social Sciences (Research and Development Institute, Suan Dusit University: SDU-RDI-SHS 2023-062: September 28, 2023). The number of questions based on the components comprised TREXP: Tourist Experience with 5 questions, SERVQ: Service Value Customer Perception with 6 questions, TRMGR: Management of Tourist Potential and Attractions Image with 6 questions, SATIS: Overall Service Quality Satisfaction with 3 questions, and CULYT: Customer Loyalty with 3 questions with the development of the questionnaire based on the guidelines from Meeprom and Silanoi (2020); Piancatelli et al. (2020); Nguyen et al. (2021); Agbisit (2021); Mohd-Ridzuan et al. (2022); Jeong and Kim, 2020; Charoensook (2017); Tu et al. (2022); Phrakhusirithammabandit et al. (2023). The data

collection process used exploration online through Google forms and Quick Response Code (QR) in order to access the questionnaire form through the smartphones of the informants (Rivas and Schulzetenberg, 2023).

Data Analysis Approach

The research framework was analyzed by Partial Least Squares Structural Equation Modeling (PLS-SEM), which is a statistical technique that has been recognized as being efficient in the investigation of the complex relationships between variables and ideally appropriate for the studies of exploratory research and when the data contradicts the hypotheses of traditional statistical models (Chanda, Vafaei-Zadeh and Hanifah, 2023). For this study, PLS-SEM was applied in order to specify the influential factors and precedents related to the influencing causal factors of Tourist Experience (TREXP) that have an impact on the Service Value Customer Perception (SERVQ), Management of Tourist Potential and Attractions Image (TRMGR), Overall Service Quality Satisfaction (SATIS), and Customer Loyalty (CULYT) of tourists regarding tourist attraction museums in order to apply the processing of the results to the management of tourist attraction museums. This study used PLS-SEM in order to assess the strengths and significance of the relationships between the variables and apply them to suggestions that provide valuable insights about the factors that have an impact on the management of museums as tourist attractions.

Results

This study was designed according to the guidelines of quantitative research with a sample of tourists that received services at six primary museums of Thailand ($n = 856$) covering the areas of Bangkok, Pathum Thani, and Chiang Mai, and data analysis was provided by using JAMOMI software (version 2.4.11) for the creation of the structural equation model in order to assess the theoretical model with the JAMOMI software, which is widely accepted in the education sector currently (The Jamovi Project, 2023; Gallucci and Jentschke, 2021; Rosseel, 2019).

Measurement Model

The research shows the results of the structural equation SEM analysis or the investigation of the measurement model by evaluation of the convergent validity and discriminant validities with convergent validity considered from: firstly, all items' factor loading, which to be acceptable, must have a value > 0.5 (Nasution et al., 2020; Shrestha, 2021) and this study had the items' factor loading of each variable, TREXP, SERVQ, TRMGR, SATIS, and CULYT, ranging from 0.598 to 0.916, which is in accordance with the conditions. Secondly, the composite reliability (CR) must be ≥ 0.7 , and the CR of this study have values in a range from 0.849 to 0.947. Thirdly, Cronbach's alpha values must be > 0.7 , and this study had Cronbach's alpha values in a range from 0.966 to 0.970 for all variables. Finally, the average variance extracted (AVE) must be ≥ 0.5 and the AVE in this study ranged from 0.539 to 0.771, which is in accordance with the measurement model verification conditions (Ahmad et al., 2021). The results of the analysis are shown in Table 2.

Table 2: Factor Loadings, CR, and AVE for model constructs

Constructs/Item: Description		Loading	CR	AVE
TREXP: Tourist Experience			0.947	0.771
EXP01	Marketing and public relations such as obtaining information COM54	0.898		
EXP02	Time period for providing services compared with other attractions COM47	0.832		
EXP03	Process or procedure of providing services compared with other attractions COM48	0.884		
EXP04	Service provider staff compared with other attractions COM49	0.861		
EXP05	Technology and innovation used in the providing of services COM52	0.921		
SERVQ: Service Value Customer Perception			0.881	0.539
SPE1	Helps make use of free time leading to the highest benefits E7	0.832		
SPE2	Easy to access and can visit frequently E4	0.598		
SPE3	Enjoyable and not boring E3	0.797		
SPE4	Up-to-date knowledge aligned with needs in the present E2	0.773		
SPE5	Effective safety measures against infectious diseases E1	0.634		
SPE6	Wide variety of learning materials are available E5	0.817		
TRMGR: Management of Tourist Potential and Attractions Image			0.933	0.684
PM	Overall management of museum services pricing	0.888		
AF	Overall management of amenities and facilities of the museum	0.916		
QD	Overall management of the quality of displays/shows/exhibitions of the museum	0.887		
MA	Overall management of museum accessibility	0.775		
IS	Overall management of information sources of the museum	0.743		
CS	Overall management of the customer service provided by museum staff	0.770		
SATIS: Overall Service Quality Satisfaction			0.849	0.676
SL1	Creation of a positive experience with the museum SL42	0.810		
SL2	Quality of the museum's services OPV40	0.848		
SL3	Satisfaction with the overall services of the museum SL41	0.809		
CULYT: Customer Loyalty			0.871	0.728
BI45	Intention to return for sightseeing at the museum again	0.887		
BI44	Will speak of impressions about the museum with other people	0.868		
BI43	Will recommend the museum to other people	0.801		

Structural Model

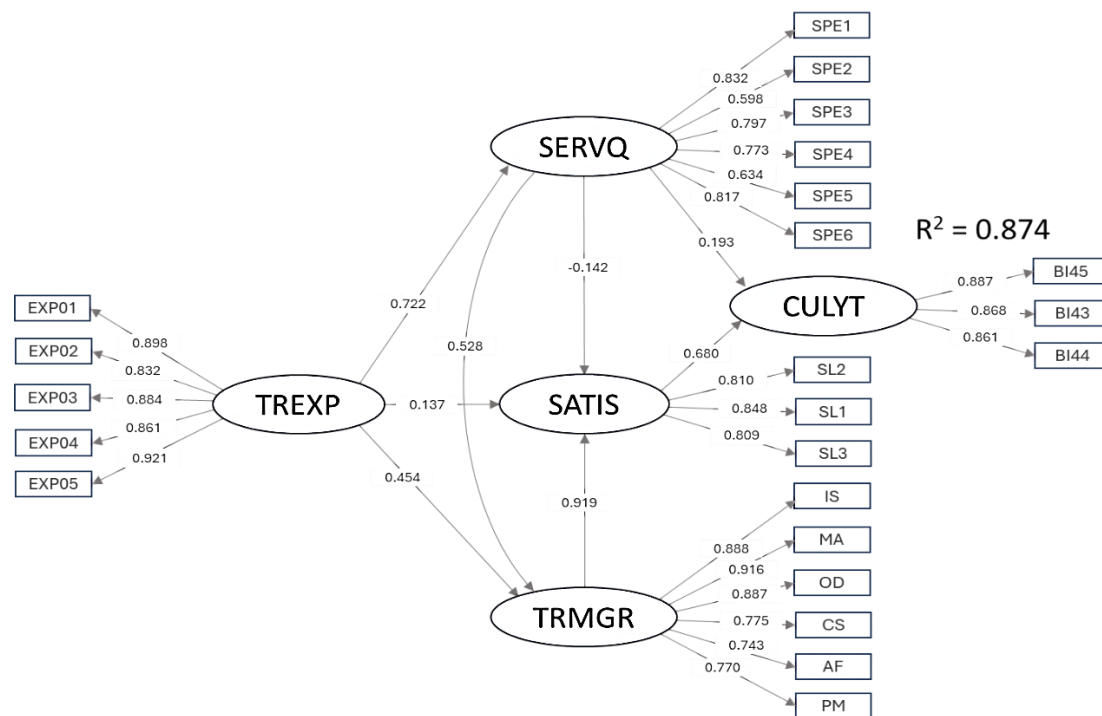
The results of the structural model analysis include the overall explanatory powers and significant path coefficients, as shown in Table 3.

Table 3: Results of the structural model analysis loading factors

	SERVQ	TRMGR	SATIS	CULYT
TREXP	0.722**	0.454**	0.137**	-
SERVQ	-	0.528**	-0.142**	0.193**
TRMGR	-	-	0.919**	-
SATIS	-	-	-	0.680**

Note: ** statistical significance level at .01

Figure 2: Measurement Model



Note: $\chi^2 = 525$, $df = 192$, relative $\chi^2 = 2.734$, $p < .001$, $RMSEA = 0.045$, $SRMR = 0.025$, $GFI = .996$, $NFI = .971$, $TLI = .975$, $RNI = .981$

As seen in Figure 2 and Table 3, the results of the analysis of the relationship model of the influencing causal factors of TREXP that have an impact on SERVQ, TRMGR, SATIS and CULYT for the design of the management of museum tourist attractions in Thailand indicate that there are the structural equation consistency index values of $\chi^2 = 525$, $df = 192$, relative $\chi^2 = 2.734$, $p < .001$, $RMSEA = 0.045$, $SRMR = 0.025$, $GFI = .996$, $NFI = .971$, $TLI = .975$, $RNI = .981$. The index of consistency is in accordance with the specified criteria, which is relative $\chi^2 = 2.734$ denotes that the model is consistent with the empirical data at an acceptable level when $2.00 < \chi^2/df < 5.00$ (Kelloway, 2015; Limphaibool et al., 2022) or the research that accepts $\chi^2/df < 3.00$ (Zhang et al., 2021). With regard to the index of RMSEA and SRMR, the value was $<$

0.05 and the indices of GFI, NFI, TLI, and RNI had values > 0.95 (Whittaker and Schumacker, 2022; Suksawang, 2014). The structural model confirms that tourism experience (TREXP) exerts a significant influence on service quality (SERVQ), tourism management (TRMGR), tourist satisfaction (SATIS), and customer loyalty (CULYT). The proposed management framework for museums as tourist attractions demonstrates an acceptable degree of alignment with empirical data. Furthermore, the model accounts for 87.4% of the variance in tourist loyalty (CULYT), with statistical significance at the 0.05 level, indicating its robustness in explaining the determinants of loyalty in the context of museum-based tourism.

Hypotheses Summary

From the results of the data analysis, the hypotheses can be summarized as compiled in Table 4.

Table 4: Hypotheses coefficients and confidence intervals

Hypothesis	Relation	Std β	Std. Error	t-Value	Confidence Interval		Supported
					5%	95%	
H1	TREXP $\rightarrow$ SERVQ	0.722	0.028	21.08**	0.550	0.650	Yes
H2	TREXP $\rightarrow$ TRMGR	0.454	0.026	14.61**	0.326	0.428	Yes
H3	SERVQ $\rightarrow$ TRMGR	0.528	0.034	15.55**	0.465	0.599	Yes
H4	TREXP $\rightarrow$ SATIS	0.137	0.030	3.61**	0.050	0.169	Yes
H5	SERVQ $\rightarrow$ SATIS	-0.142	0.045	-3.04**	-0.227	-0.049	Yes
H6	TRMGR $\rightarrow$ SATIS	0.919	0.062	14.94**	0.799	1.040	Yes
H7	SERVQ $\rightarrow$ CULYT	0.193	0.050	4.24**	0.113	0.308	Yes
H8	SATIS $\rightarrow$ CULYT	0.680	0.055	13.96**	0.657	0.872	Yes

From the results presented in the table, it is possible to explain the direct effects as follows:

- SERVQ has a positive influence from TREXP at $\beta = 0.722$ (t-Value = 21.08**), supporting H1.
- TRMGR receives a positive influence from TREXP at $\beta = 0.454$ (t-Value = 14.61**), supporting H2, and SERVQ at $\beta = 0.528$ (t-Value = 15.55**), supporting H3.
- SATIS receives a positive influence from TREXP at $\beta = 0.137$ (t-Value = 3.61**) supporting H4. Nevertheless, it was found that there is a negative influence of SERVQ at $\beta = -0.142$ (t-Value = -3.04**), supporting H5.

- SATIS receives the primary positive influence from TRMGR at $\beta = 0.919$ (t-Value = 14.94**), supporting H6.
- CULYT receives the main positive influence from SATIS at $\beta = 0.680$ (t-Value = 13.96**), supporting H8, and a secondary positive influence from SERVQ at $\beta = 0.193$ (t-Value = 4.24**), supporting H7.

Discussion

These research results are the empirical data supporting the discussion of the issues. This study supports a management approach that attempts to understand and identify the methods in the management of the expectations and needs of the stakeholders in tourist groups or the recipients of services at museums (Moreno-Mendoza et al., 2020), that compiled the guidelines from previous studies of the various aspects in order to include the dimensions of diversity in management. The study established relationships and confirmed the model based on the specified variables and according to the conditions of the study. It was found that with regard to CULYT, which is evaluated from repeat purchases, informing others about the benefits of the museum, and recommending other people to visit and use the services of the museum, the consistency of the research results is in line with the empirical data at an acceptable level and is able to explain the 87.4% variance of the CULYT results, which is statistically significant. This is in alignment with the research of other scholars who have presented the same aspects (Tu et al., 2022; Phrakhusirithammabandit et al., 2023; Mohd-Ridzuan et al., 2022).

For the factors that have an influence on the results of the study, it was indicated that CULYT receives a positive influence from the primary factor, which is SATIS ($\beta = 0.680$: Supporting H8) and receives a positive influence from the secondary factor SERVQ ($\beta = 0.193$: Supporting H7). The research results do not include data that are able to be refuted due to the differences with other research that studied the relationships resulting from the influence of SERVQ and SATIS on CULYT (Nurul and Putra, 2013; Detsaro et al., 2022; Mohd-Ridzuan et al., 2022; Vesci et al., 2021).

The study found a negative influence of SERVQ on SATIS ($\beta = -0.142$: Supporting H5). The research results of various scholars concluded that the influence of SERVQ is transmitted both directly to CULTY and indirectly through SATIS to CULTY, in which the majority of scholars summarized their results and explained the positive influence that they have on each other (Meeprom and Silanoi, 2020; Nguyen et al., 2021). Moreover, in the study of Chikazhe et al. (2021), the ambiguity of the mutual influence of SERVQ and SATIS was found as well. It was found that when SERVQ is higher, it has an influence on SATIS and transmits an indirect influence to CULTY at a high level, and will cause the previously mentioned influence to mainly occur in the sample group that are the first-time service users or tourists visiting a museum, and it is reasoned that the personal characteristics factor of the informants cause the impacts on SATIS and on CULTY to be different. This is especially true in the group of customers or service recipients that have the personal characteristics factor regarding education that is higher and have interaction with the content at the exhibitions, displays or presentations of the museum. They will make a comparison with previous experiences

or experiences gained from elsewhere that were better or compare with experiences that took place in the past prior to their repeat purchases or use of services, which will cause there to be SERVQ that is higher and have an impact on SATIS if the thing that was experienced has been perceived or experienced already and the level is lower than the expectations (Chikazhe et al., 2021). Additionally, when reviewing the characteristics of the sample group of this study, it was indicated that the majority of the informants (54.44%) who have the education level of bachelor's degree and up re-visited 42.40%, which is a possibility that is in line with Chikazhe et al. (2021). It was also found that the operational guidelines of all six museums still mainly focus on knowledge ranging from a basic level to a pre-university level despite the increased emphasis on the trend of using technology and the modernization of the methods to present basic knowledge.

Regarding SATIS, it was indicated that it receives the main positive influence from TRMGR ($\beta = 0.919$: supporting H6) and a secondary positive influence from TREXP ($\beta = 0.137$: supporting H4). Nonetheless, there is also a negative influence from the ambiguity, as explained above, of the SERVQ ($\beta = -0.142$: Supporting H5), which indicates that the influence of SERVQ that was obtained from the data is at the level that is similar to TREXP and possibly results from the different values of experience and hope. TREXP at a high level and the higher perceived SERVQ will result in better SATIS and will have a reduced influence on SATIS if SERVQ is lower than TREXP (Cronin and Taylor, 1992; Chikazhe et al., 2021; Azman-Ong and Indriasri-Pratiwi, 2022).

From the balance issue of SERVQ being lower than TREXP as mentioned above, there is an impact on the management approaches, or TRMGR, that indicated both the positive influence of SERVQ ($\beta = 0.528$: supporting H3) and the positive influence of TREXP ($\beta = 0.454$: supporting H2) are the input factors for TRMGR, and this is the direction that the management department must create so that SERVQ surpasses the experiences and the expectations (TREXP), which have a positive influence on SATIS according to the management guidelines (Phrakusirithammabandit et al., 2023; Mohd-Ridzuan et al., 2022; Chikazhe, et al., 2021; Jeong and Kim, 2020). Lastly, it was found that a positive influence of TREXP affects SERVQ ($\beta = 0.722$: supporting H1), which is a possibility in line with other scholars regarding the accumulation of experiences as leading to better perceptive abilities (Piancatelli et al., 2020; Nguyen et al., 2021).

In conclusion various museums around the world also show their commitment based on an intention to be organizations that conserve and organize exhibitions of various objects to study them in the future, to create enjoyment for the general public, and to present them to the people of later generations. As a result of this, various studies on museums indicate that the management is unable to resist change, requiring that there must be adjustments to the operations of the museums so they can be modernized, from which they will be unlikely to reject the acceptance of changes that occur quickly. This includes the role of museums during periods of change and that there must be an evolution away from being cultural and educational institutions to being a business unit in the context of the economy. Subsequently, the existence of the new role of museums has received a large amount of interest that is increasing continuously, not only from museum experts but also economic experts and policymakers who are involved in pushing to allow the present number of museums to greatly and continuously increase. Additionally, there is the expectation to create the outcomes of strengthening the potential by adding value to communities together with tourism and allow museums to

become one of the key components in the development of the cultural economy and unique places for presentations in the tourism industry of the 21st century (ShawHong, 2020).

Regarding the challenges of museum management in the age of the 21st century, it appears that the management of museums will be conflict with the original intent of the traditional museums, galleries or exhibition halls. Research confirms the challenges of extinction if adaptation does not occur; thus, in order to result in integration with the modern age, including the difficult creation of integrated exhibitions with costs that may be high or low and the transformation to digital formats, all of which require “new thinking”, process-oriented thinking must go beyond the old rules so that museums will not be “the cold and dusty places of old” any longer. However, museums must be developed until they become the educational areas or locations for the learning of people of all ages and each background, which is a concept that has resulted in the new modern museums of the present (Agbisit, 2021). Pholsim and Suriya (2023) present a consistent theme that a museum that accepts being a tourist attraction and is able to create revenue for the museum must adjust its guidelines to have efficient management and appropriately integrate with the costs or the specific context of the area, which can make it possible for museums to effectively become important economic drivers in learning and tourism.

Limitations of the Study

In this study, although the theoretical and practical supporting data was obtained from the sample group of museums that are considered not-for-profit organizations, there appear to be new guidelines for the operations that the organizations are familiar with, in which the management to seek profits that are sufficient regarding the survival of the organizations is not required and there are various agencies providing resources for their operations. However, all in all, in the context and the expectations that are changing, finding management approaches is necessary to be in accordance with these new goals and expectations, for example, the expectations involving the economy, expectations of solving social problems, expectations for management to achieve excellence, or others that come along with various types of support. Even more beneficial would be the requirements that the organizations must have careful interpretation and identify guidelines in operations in order to overcome limitations for the sake of clarity.

Practical Implications for Asian Business

This study offers valuable insights with significant strategic, business, and theoretical implications for the development and management of museums in Asian countries, particularly within the ASEAN region. As museums are increasingly recognized as integral to cultural preservation, education, and the creative economy, the Thai experience provides a compelling case for how museum institutions can be positioned as dynamic contributors to both tourism and economic development.

From a strategic perspective, the study underscores the critical role of public policy in facilitating museum expansion and integration into national development agendas.

Thailand's successful establishment of over 1,600 museums exemplifies how supportive cultural policy, when aligned with creative economy initiatives and tourism objectives, can enhance national cultural infrastructure. These findings are highly relevant to other ASEAN countries aiming to achieve similar developmental goals under the ASEAN Socio-Cultural Community (ASCC) Blueprint. A well-formulated national strategy that positions museums as focal points for tourism, education, and community engagement can yield both cultural and economic dividends.

The study also presents important business implications. The empirical model—linking Tourist Experience (TREXP), Service Value Perception (SERVQ), Tourism Management (TRMGR), Satisfaction (SATIS), and Customer Loyalty (CULYT)—demonstrates how museums can transition from passive cultural institutions to active, customer-centric service organizations. In a competitive tourism landscape, museums must deliver high-quality visitor experiences, deploy modern technologies, and adopt flexible service strategies to attract and retain visitors. Repeat visitation, a key indicator of loyalty, is influenced not only by service quality but also by continuous innovation in content and engagement.

Furthermore, the study reveals that satisfaction tends to decline among returning visitors, a finding that suggests the need for experience differentiation and content renewal. Rotating exhibitions, localized storytelling, and interactive displays can maintain engagement and enhance perceived value. Additionally, museums should consider implementing business strategies common in the service sector, such as loyalty programs, audience segmentation, and digital marketing, to build stronger connections with visitors. These approaches also open pathways for revenue diversification through merchandise, special events, guided tours, and corporate sponsorships.

From a theoretical standpoint, this research contributes to the expanding literature on museum service management by validating a comprehensive structural model that connects experiential, perceptual, and behavioral dimensions. The use of Partial Least Squares Structural Equation Modeling (PLS-SEM) strengthens the methodological rigor and supports causal inferences between variables. Notably, the study identifies a negative relationship between SERVQ and SATIS among repeat visitors, highlighting an expectation-performance gap that may occur as visitor sophistication increases. This nuance suggests a need for further theoretical exploration into how service perception evolves in non-profit and cultural settings, particularly among different visitor segments.

Moreover, the study addresses an important research gap in Asian contexts, where empirical investigations into museum marketing and management remain limited. By focusing on the Thai museum sector, this study demonstrates that applying tourism and marketing theories to cultural institutions can yield meaningful insights and practical recommendations. The proposed framework can serve as a foundation for comparative studies across Asia, helping scholars and practitioners alike to better understand the dynamics of visitor behavior and loyalty in museum tourism.

In conclusion, the Thai case offers a scalable and adaptable model for other Asian countries. By integrating strategic policy alignment, business-oriented management, and theoretically grounded approaches, museums can be repositioned as resilient, innovative, and economically sustainable institutions that contribute meaningfully to

national development, cultural diplomacy, and regional cooperation.

References

- Ada, N., Pirnar, I. and Altın, H.O., (2022), "Vitality of strategic museum management: An application from Turkish museums", *Alanya Akademik Bakis*, vol. 6, no. 1, pp. 1891-1905.
- Agbisit, B.J., (2021), "Are traditional museums and galleries on the brink of extinction?", *The Asian, Creative Economy Culture, Identity and the Business of Creativity*, pp. 54-57.
- Ahmad, S., Islam, T., Sadiq, M. and Kaleem, A., (2021), "Promoting green behavior through ethical leadership: A model of green human resource management and environmental knowledge", *Leadership and Organization Development Journal*, vol. 42, no. 4, pp. 531-547.
- Carlson, J., Rahman, M.M., Taylor, A. and Voola, R., (2019), "Feel the VIBE: Examining value-in-the brand-page-experience and its impact on satisfaction and customer engagement behaviours in mobile social media", *Journal of Retailing and Consumer Services*, vol. 46(C), pp. 149-162.
- Chanda, C.R., Vafaei-Zadeh, A. and Hanifah, H., (2023), "Investigating factors influencing individual user's intention to adopt cloud computing: A hybrid approach using PLS-SEM and fsQCA", *Kybernetes*, vol. 53, no. 11, pp. 4470-4501.
- Charoensook, C., (2017), *The causal factors influencing the perceived value, tourist attraction potential and destination loyalty of historical attractions (world heritage sites) of Thailand*, DBA thesis, Sripatum University.
- Chikazhe, L., Makanyeza, C., Chigunhah, B. and Akbari, M., (2021), "Understanding mediators and moderators of the effect of customer satisfaction on loyalty", *Cogent Business and Management*, vol. 8, no. 1.
- Detsaro, C., Seeyong, C. and Jansri, W., (2022), "Factors influencing the intention of Thai tourist revisiting Phuket province", *Economics and Business Administration Journal, Thaksin University*, vol. 11, no. 1, pp. 121-140.
- Gallucci, M. and Jentschke, S., (2021), *Jamovi SEM analysis* [Jamovi module], Available at: <https://semlj.github.io/> (Accessed: 27 June 2025).
- Ghorbanzadeh, D., Shabbir, S.M., Mahmood, A. and Kazemi, E., (2021), "Investigating the role of experience quality in predicting destination image, perceived value, satisfaction, and behavioral intentions: a case of war tourism", *Current Issues in Tourism*, vol. 24, no. 21, pp. 3090-3106.
- ICOM, (2019), *Museums as Cultural Hubs: The Future of Tradition*, Available at: <https://imd.icom.museum/past-editions/2019-museums-as-cultural-hubs-the-future-oftradition/>.
- International Council of Museums, (2022), *Museum Definition*, Available at: <https://icom.museum/en/resources/standards-guidelines/museum-definition/>.
- Jeong, Y. and Kim, S., (2020), "A study of event quality, destination image, perceived value, tourist satisfaction, and destination loyalty among sport tourists", *Asia Pacific Journal of Marketing and Logistics*, vol. 32, no. 4, pp. 940-960.
- Kelloway, E.K., (2015), *Using Mplus for Structural Equation Modeling: A Researcher's Guide*, Sage Publications, CA.
- Kim, S., Park, E. and Xu, M., (2020), "Beyond the authentic taste: The tourist experience at a food museum restaurant", *Tourism Management Perspectives*, vol. 36, 100749.
- Koc, E., (2021), *Cross-Cultural Aspects of Tourism and Hospitality: A Services Marketing and Management Perspective*, Routledge, New York.
- Limphaibool, W., Buranapin, S., Jariangprasert, N. and Chaiprasit, K., (2022), "Collective Mindfulness and Organizational Resilience in Times of Crisis", *Change Management: An International Journal*, pp. 49-60.
- Meeprom, S. and Silanoi, T., (2020), "Investigating the perceived quality of a special event and

- its influence on perceived value and behavioural intentions in a special event in Thailand”, *International Journal of Event and Festival Management*, vol. 11, no. 3, pp. 337-355.
- Mohd-Ridzuan, N.A., Hamid, R., Azman Ong, H.M. and Pratiwi, I.A., (2022), “Exploring the influence of e-Service Quality toward Customer management Behavior via PLS-SEM: Findings from a hotel’s customer perspective”, *Environment-Behaviour Proceedings Journal*, vol. 7, no. 21, pp. 263-269.
- Moreno-Mendoza, H., Santana-Talavera, A. and Boza-Chirino, J., (2020), “Perception of governance, value and satisfaction in museums from the point of view of visitors: Preservation-use and management model”, *Journal of Cultural Heritage*, vol. 41, pp. 178-187.
- Najib, M.F., (2020), “How store image affect satisfaction and loyalty: a structural model for traditional market”, *Advances in Social Science, Education and Humanities Research*, vol. 542, pp. 5-9.
- Nasution, M.I., et al., (2020), “The Quality of Small and Medium Enterprises Performance Using the Structural Equation Model Part Least Square (SEM-PLS)”, *Journal of Physics: Conference Series*, vol. 1477, 052052.
- Nguyen, X.N., Tran, K. and Nguyen, A.T., (2021), “Impact of Service Quality on In-Patients’ Satisfaction, Perceived Value, and Customer Loyalty: A Mixed-Methods Study from a Developing Country”, *Patient Preference and Adherence*, vol. 15, pp. 2523-2538.
- Nurul, S.Z. and Putra, F.Z., (2013), “Managing Customer Retention of Hotel Industry in Malaysia”, *Procedia - Social and Behavioral Sciences*, vol. 130, pp. 379-389.
- Parasuraman, A., Zeithaml, V.A. and Berry, L.L., (1988), “SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality”, *Journal of Retailing*, vol. 64, no. 1, pp. 12-40.
- Pholsim, S. and Suriya, S., (2023), “The So Phisai Model: A New Approach to Local Development Based on Community Museum Mechanism”, *Local Administration Journal*, vol. 16, no. 2, pp. 289-312.
- Phrakusirithammabandit, Rujjanapan, B., Padkaew, N. and Phichaiwong, O., (2023), “Prototype of Temple and Community Museums in the Electronic System of Lanna Community”, *The Journal of Research and Academics*, vol. 6, no. 1, pp. 41-50.
- Piancatelli, C., Massi, M. and Vocino, A., (2020), “The role of atmosphere in Italian museums: effects on brand perceptions and visitor behavioral intentions”, *Journal of Strategic Marketing*.
- Punpeng, G., (2021), “Thai Creative Industries In Flux”, *The ASEAN*, October–November, pp. 38–40.
- Rivas, A.G. and Schulzetenberg, A., (2023), “QR Codes as a Method for Older Adults to Access a Mobile Survey”, in Gao, Q. and Zhou, J. (Eds.), *Human Aspects of IT for the Aged Population. HCII 2023*, Springer, Cham.
- Rosseel, Y., (2019), “lavaan: An R Package for Structural Equation Modeling”, *Journal of Statistical Software*, vol. 48, no. 2, pp. 1–36.
- Jamovi Project, (2023), *jamovi* (Version 2.4) [Computer software], Available at: <https://www.jamovi.org>.
- Royal Thai Embassy, Washington D.C., (2019), *Thailand building the largest museum in Southeast Asia*, Available at: <https://thaiembdc.org/2019/03/25/thailand-building-the-largest-museum-in-southeast-asia/>.
- ShawHong, S., (2020), “Museums and Tourism: Reengineering the Role of Museums in Malaysia’s Cultural Heritage Tourism”, *Journal Becos (Business Economic, Communication, and Social Sciences)*, vol. 2, no. 1, pp. 145–157.
- Shrestha, N., (2021), “Factor Analysis as a Tool for Survey Analysis”, *American Journal of Applied Mathematics and Statistics*, vol. 9, no. 1, pp. 4–11. <https://doi.org/10.12691/ajams-9-1-2>
- Srisuk, N., Chanthasaro, P.A.S. and Rujjanapan, B., (2022), “The Community Museum Prototyping in Electronic System”, *Journal of Buddhist Studies*, vol. 13, no. 1, pp. 140–159.

- Suksawang, P., (2014), “The Basics of Structural Equation Modeling”, *Princess of Naradhiwas University Journal*, vol. 6, no. 2, pp. 136–145.
- The Princess Maha Chakri Sirindhorn Anthropology Centre, (2022), *Growth of Museums in Thailand*, Available at: <https://db.sac.or.th/museum/statistic>.
- Tu, J.-C., Hsu, C.-F. and Creativani, K., (2022), “A Study on the Effects of Consumers’ Perception and Purchasing Behavior for Second-Hand Luxury Goods by Perceived Value”, *Sustainability*, vol. 14, 10397.
- Vesci, M., Conti, E., Rossato, C. and Castellani, P., (2021), “The mediating role of visitor satisfaction in the relationship between museum experience and word of mouth: evidence from Italy”, *The TQM Journal*, vol. 33, no. 1, pp. 141–162.
- Whittaker, A.T. and Schumacker, R., (2022), *A beginner's guide to structural equation modeling* (5th ed.), Routledge, New York.
- Zhang, Q., Huang, F., Zhang, L., Li, S. and Zhang, J., (2021), “The effect of high blood pressure-health literacy, self-management behavior, self-efficacy and social support on the health related quality of life of Kazakh hypertension patients in a low-income rural area of China: a structural equation model”, *BMC Public Health*, vol. 21, p. 1114.



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