

Developing a Structural Framework for Sustainable Islamic Tourism Development: A PLS-SEM Approach

Samer Yaghmour¹, Ihtisham Ullah^{2*}, Kashif Hussain³, Thaib Alharethi¹, and Ahmad Nazri Razali⁴

¹*Department of Travel and Tourism Management, King Abdulaziz University, 21589 Jeddah, Saudi Arabia*

²*Strategic Research Institute (SRI), Asia Pacific University of Technology and Innovation, 57000 Kuala Lumpur, Malaysia*

³*School of Global Hospitality and Tourism, Asia Pacific University of Technology and Innovation, 57000 Kuala Lumpur, Malaysia*

⁴*School of Business, Asia Pacific University of Technology and Innovation, 57000 Kuala Lumpur, Malaysia*

ABSTRACT

The current study investigates the roles of Islamic cultural heritage, Islamic infrastructure development, and Islamic architecture towards Muslim tourist satisfaction, and Islamic tourism developments with the aim to guide practitioners with strategic interventions for fostering best practices and maximise the environmental, economics and socio-economic benefits for sustainable Islamic tourism development in Malaysia. A questionnaire survey with 251 responses was collected from tourists in Malaysia using a 5-point Likert scale with a non-probability purposive sampling technique for participant selection and recruitment, while the causal relationship between variables was examined using the PLS-SEM approach. Findings revealed that Islamic cultural heritage, Islamic infrastructure development and Islamic architecture have a significant effect on Muslim tourist satisfaction. This investigation employs Islamic cultural heritage, Islamic infrastructure development, and Islamic architecture to gain insight into customer satisfaction towards Islamic tourism in Malaysia.

ARTICLE INFO

Article history:

Received: 20 January 2026

Accepted: 01 June 2026

Published: 30 June 2026

DOI: <https://doi.org/10.47836/pjssh.34.3.23>

E-mail addresses:

yaghmour@kau.edu.sa (Samer Yaghmour)

ihhtisham.ullah@apu.edu.my (Ihtisham Ullah)

kashif.hussain@apu.edu.my (Kashif Hussain)

talharethi@kau.edu.sa (Thaib Alharethi)

anrazali@apu.edu.my (Ahmad Nazri Razali)

* Corresponding author

Keywords: Islamic tourism development, Islamic culture and heritage, Malaysia, Muslim tourist satisfaction, sustainable

INTRODUCTION

Islamic tourism encompasses travel experiences focused on destinations and activities significant to Muslims worldwide (Al-Ansi et al., 2023; Monoarfa et al., 2022).

Islamic tourism is used as an umbrella term for travel guided by Islamic values and worship, whereas halal tourism refers to Shariah-compliant services such as halal food, prayer facilities and Muslim-friendly accommodation (Mohsin et al., 2023). It includes pilgrimages, visits to landmarks and cultural immersion that support economic development, cultural preservation and intercultural understanding (Chaturvedi & Ranjan, 2026; Khalid et al., 2023).

One of the issues addressed in this long-term goal is to develop the Islamic cultural heritage, transportation infrastructure, and the concept of Islamic arts and architecture. Cultural centres such as mosques, madrasas and historical sites sound off a bell to the many who desire to get spiritual empowerment, cultural immersion and to learn about the past way of living of others. The right infrastructure is the guarantee of accessibility, as no comfort is given up by visitors through hostels laid out and transport systems created (Nigatu et al., 2023). Islamic architecture, with its intricate designs and historical significance, serves as an attraction for tourists interested in the Islamic aesthetic (Al khalifa & Lafi, 2025). The trend of maintaining the Islamic fashion can be exactly associated with the preference of its customers for the precious and prestigious Islamic decoration, also with all historical meanings. Similarly, as mentioned by Sutianto et al. (2023), protecting and managing these characteristics is critical for all the stakeholders, such as tourists, residents, and other parties involved,

since it provides them with an out-of-class experience which in turn results in income growth, community empowerment and sustainability development among many others.

The Islamic tourism industry of Malaysia is vibrant because of the nation that endorses Halal culture, the various Islamic cultural heritages, and the rich Islamic history. The Islamic Arts Museum with the Sultan Salah Uddin Abdul Aziz is one of the two most well-known landmarks in the country, and they attracts Muslim pilgrims from all over the world (Khalid et al., 2023). Through its robust hotel industry and well-established infrastructure, Malaysia can satisfy the growing demand from halal-conscious tourists. This is demonstrated by the offering of a variety of options, which are halal-friendly in terms of accommodation, restaurants, and activities. The implementation of the Halal Tourism Blueprint by the government is the impetus for the sector's development tasks, which have a positive impact on the tourism industry. The magic of this place is that it is a unique combination of the most modern amenities, historical Islamism, and a welcoming legal environment, which explains why this country is one of the best destinations for Islamic tourism (Ma'asor et al., 2023).

Awareness of real barriers and impediments in the use of Islamic tourism development should now pass to the public sector, since they are the only authorities that can implement an effective plan. Not all the historic buildings in Islamic

tourism destinations have been given the attention required, and there are seldom suitable transportation systems, either railways or roads, that fit and bring these features to life. It always remains a considerable problem which closes the access to a large part of Islamic tourism destinations and steals lots of the atmosphere created for visitors. In these areas, systems where the number of hosts is mature enough to provide the required hospitality space, habitable units, and adequate transport network cannot possibly exhibit the necessary growth up to economic development (Mazlan et al., 2023). Furthermore, the heritage sites, one of the main factors driving up tourism inflow, face deprivation of care and lack funds in turn and their identity is lost forever due to their loss of authenticity. Besides, others Muslims destination that is characterised by multifarious expectations of those travellers always constitute an overwhelming challenge in the delivery of Islamic travel services because halal food items must also be supplied (Fauzi & Battour, 2024). Furthermore, as such, the absence of policies and structure that causes hindrance in the establishment of the Halal tourism growth becomes another consequence. These issues must be explored with care in order to make it possible for tourism at the Islamic sites to become its full force in the promotion of the Islamic cultural heritage, scientific advancement and environmental conservation (Al-Ansi et al., 2023).

Prior studies have established that Islamic tourism involves intertwined cultural, economic, and social dimensions; however, their treatment of heritage, infrastructure, and architecture remains fragmented rather than theoretically integrated (Hanafiah et al., 2022; Mazlan et al., 2023; Sutianto et al., 2023). While this literature affirms the relevance of Islamic destination attributes, it does not clearly explain how these attributes jointly shape Muslim tourist satisfaction and, in turn, sustainable Islamic tourism development in a single model. This unresolved linkage constitutes the central gap addressed in the present study.

The main purpose of this paper is to bridge the research gap by identifying two ways that are understandable concerning the relationship among the Islamic cultural heritage, Islamic architecture, tourism infrastructures, and the satisfaction of tourists. The goal of this study is to focus on giving an in-depth understanding of the processes that contribute to having sustainable benefits in the tourism destinations in Islam by identifying the mediation of Muslim tourist satisfaction. Such work underlines the importance of a deep understanding of the elaborate mechanisms of the elements contributing to lasting and holistic Islamic tourism development. Islamic tourism, becoming increasingly international, has recently become highly topical, with the environment and growth patterns being the pivotal issues to investigate. Researchers are motivated by the opportunity to fill the existing research

gap, contributing valuable insights for policymakers, tourism authorities, and industry stakeholders. By investigating the roles of Islamic cultural heritage, infrastructure, and Islamic architecture towards Muslim tourist satisfaction and tourism development, this study aims to guide strategic interventions for fostering sustainable practices and maximising the socio-economic benefits of Islamic tourism.

Despite many studies in the past examined cultural heritage, tourist satisfaction and tourism infrastructure in various tourism settings, very little research has combined Islamic cultural tourism, Islamic architecture, and Islamic heritage in a single framework to illustrate Islamic tourism and sustainable development in this context. This research also addresses the prominent gap by proposing a comprehensive model and empirically validating that the Islamic destination factors affect sustainable outcomes in the Malaysian context. This study contributes to existing literature and gives strong theoretical insights for Islamic tourism development.

The remainder of the paper consists of a literature review and development of the hypothesis, followed by methods that discuss the study's sample population, measures, data collection method, and data analysis technique. The fourth section discusses the study findings and supportive arguments from past studies. The last section will discuss the conclusive remarks, theoretical implications, recommendations, limitations, and future research directions.

LITERATURE REVIEW

Determinants of Muslim Tourist Satisfaction

Satisfaction refers to the experiences that provide experience and fulfil visitors' expectations (Rauf et al., 2024). Social exchange theory, developed by the Georgian sociologist Georges Homans in the 1950s, postulates that people would enter into social relationships based on a formal calculation of costs and benefits (Homans, 1974). Concerning tourism, visitors are in search of activities that are reasonably profitable for the money they have spent because such pursuits are seen as a satisfactory exchange for their resources. Historical heritage sites value and ensure that the tourists experience distinct and inspiring moments. Although prior studies generally report a positive association between heritage-based experiences and tourist satisfaction, the evidence is not entirely uniform. Some studies emphasise authenticity and cultural immersion as primary drivers of satisfaction, whereas others show that service quality, destination image, and perceived value condition that relationship (Domínguez-Quintero et al., 2021; Rasoolimanesh et al., 2022; Uslu et al., 2023). This suggests that Islamic cultural heritage should not be treated as a self-evident predictor of satisfaction; rather, its effect requires further testing in a destination-specific Islamic tourism context such as Malaysia. Hence, it has been hypothesised that:

H1: Islamic cultural heritage has a significant effect on Muslim tourist satisfaction.

The role of Islamic infrastructure development on the satisfaction of tourists can be strongly tied to equity theory in the 1960s, as proposed by Adams (2015). According to this theory, the basis for the satisfaction evaluation comes from the perceived fairness in social interactions. In the tourism setting, equitable sharing of infrastructure resources such as transport and lodging guarantees tourists their expenses and time (Zulvianti et al., 2023). When visitors are supplied with services that are directly related to their investment, the commission promotes fairness and pleasure (Manosuthi et al., 2026). Hence, Islamic infrastructure development becomes a vital factor in an endeavour to have equal access to the resources by the tourists, as it tends to affect the satisfaction levels of the people favourably. This points out the role of fairness in making sure that all infrastructure amenities are distributed, that lead to better experiences of tourism (Rady et al., 2023). Hence, it has been hypothesised that:

H2: Islamic infrastructure development has a significant effect on Muslim tourist satisfaction.

The connection of Islamic architecture with tourists is clearly understood through social exchange theory. In the field of tourism, tourists allot resources, which range from time and money, in order to visit each location with Islamic heritage (Wu et al., 2024). The Islamic art, with its intricate patterns, historical background, and cultural complexity, is the one thing that differentiates a trip as valuable and

educational from the mere pleasure sightseeing experience (Alkhalifah et al., 2025). It is the intellectual reward of the investment. Tourists, captivated by beauty and culture while viewing them, tend to become higher. In this manner, social exchange theories provide one of the more complete and general frameworks for thinking about how Islamic architecture, by interacting positively with tourists, brings them satisfactory experiences during their travels (Arabov et al., 2024). Hence, it has been hypothesised that:

H3: Islamic architecture has a significant effect on Muslim tourist satisfaction.

Muslim Tourist Satisfaction and Sustainable Islamic Tourism Development

The principle of sustainable Islamic tourism development, considering the importance of Muslim tourist satisfaction, can be justified with equity theory. Equity theory asserts that people assess the equity of their relationships according to their perception of the balance between their inputs and outputs (Zulvianti et al., 2023). In the context of tourism, the higher satisfaction leads to the assumption that tourists perceive an experience as fair, since they have already invested a lot. During their Islamic tourism activities, a tourist's reaction that he received sufficient value and positive experiences will definitely encourage him to participate and give support to the development and conservation practices of Islamic heritage sites and cultural resources (Mohsin et al., 2023).

Accordingly, equity theory offers a consistent and systematic platform for explaining the human psychological processes behind Muslim tourist satisfaction with sustainable Muslim tourism growth by creating fairness perceptions and promoting long-term commitment to the destination (Zulvianti et al., 2023). Hence, it has been hypothesised that:

H4: Muslim tourist satisfaction has a significant effect on sustainable Islamic tourism development.

Mediating Role of Muslim Tourist Satisfaction

Drawing on Social Exchange Theory and Equity Theory provides a fuller explanation of how Muslim tourist satisfaction advances sustainable Islamic tourism development. These perspectives clarify reciprocal benefit and perceived fairness, yet they do not fully capture how tourists actively construct value through destination encounters. In this respect, perceived value and value co-creation offer complementary insight, as Islamic heritage, infrastructure, and architecture may shape satisfaction through experiential value formation and participatory meaning-making (Abror et al., 2023; Zulvianti et al., 2023). Likewise, the mediating role of tourist satisfaction between Islamic cultural heritage and sustainable Islamic tourism development is consistent with social exchange logic, as tourists evaluate heritage experiences in terms of expected rewards and cultural enrichment (Cheraghi et al., 2026; Tabaeian et al., 2023).

When tourists feel that these exchanges are positive, levels of satisfaction rise. In a sustainable tourism practice, the visitors who are culturally satisfied will be more inclined to promote tourism aimed at preserving cultural legacy, which is a source of community identity and pride. As a result, social exchange theory provides a means through which the gains derived from Islamic cultural heritage sites can relate to tourists' satisfaction with the tour destination. Equity theory complements this perspective by focusing on perceived fairness: tourists feel satisfied when the outcomes they receive, such as service quality and cultural enrichment, are proportional to the time and money invested (Zulvianti et al., 2023). When exchanges are both rewarding and fair, satisfied Muslim tourists are more willing to support conservation, comply with sustainable practices and advocate for Islamic destinations, thereby strengthening long-term sustainable Islamic tourism development (Mohsin et al., 2023; Phi et al., 2024). This dual-theory lens clarifies the mediating role of satisfaction between attributes and sustainability. Hence, the study hypothesised that:

H5: Muslim tourist satisfaction significantly mediates the effect of Islamic cultural heritage on sustainable Islamic tourism development.

The mediation of Muslim tourist satisfaction in the relationship between Islamic infrastructure development and sustainable Islamic tourism development is well-supported by equity theory. In the context of tourism, Islamic infrastructure

development provides tourists with essential amenities and services, enhancing their overall experience (Zulvianti et al., 2023). When tourists perceive these improvements positively, they are more likely to feel treated, leading to higher levels of satisfaction. Satisfied tourists are then more inclined to support sustainable tourism practices that contribute to the preservation and development of Islamic heritage sites (Phi et al., 2024). Therefore, equity theory provides a coherent framework for understanding how Islamic infrastructure development influences Muslim tourist satisfaction, which in turn mediates the relationship between Islamic infrastructure development and sustainable Islamic tourism development (Subawa et al., 2023). Hence, it has been hypothesised that:

H6: Muslim tourist satisfaction significantly mediates the effect of Islamic infrastructure development on sustainable Islamic tourism development.

The hypothesis that the pursuit of the satisfaction of tourists is a good explanation

of the role of Islamic architecture in promoting sustainable Islamic tourism development is consistent with the social exchange theory. Tourism in Islamic architecture provides tourists with a unique cultural experience. Once tourists enjoy these experiences, they turn into happier entities, as proven by Abbasian et al. (2023). Satisfied tourists have a higher chance of supporting measures that guarantee sustainability and prevent damage to Islamic heritage sites. Therefore, social exchange theory gives an insight into the positive experience of Islamic architecture that results in the moodiness of tourists and then that in turn supports the sustainable Islamic tourism development (Abror et al., 2023). Hence, it has been hypothesised that:

H7: Muslim tourist satisfaction significantly mediates the effect of Islamic architecture on sustainable Islamic tourism development.

In retrospect, Figure 1 depicts the graphical representation of the conceptual framework based on the hypothesised relationship between variables.

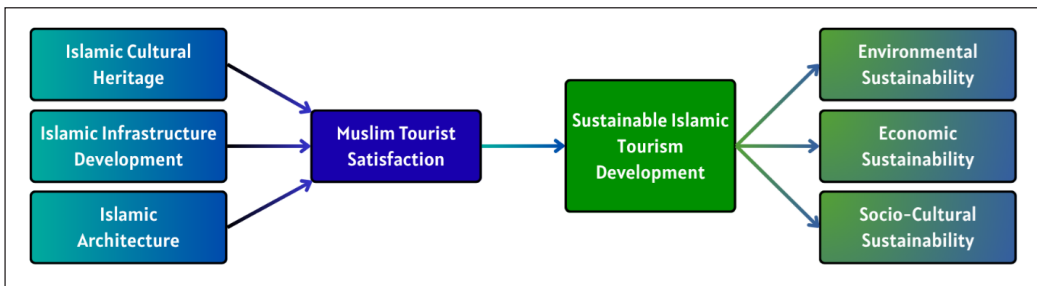


Figure 1. Conceptual framework for sustainable Islamic tourism development

METHODS

Sample and Population

The sample for this study comprises Muslim tourists visiting Malaysia, a destination attracting travellers whose backgrounds and motivations are fitting for the study of Islamic tourism dynamics (Tan & Soon, 2023). A screening question at the beginning of the questionnaire made sure that only the self-identified Muslim tourists continued with it. Malaysia has been an Islamic tourism destination with rich heritage and Islamic infrastructure; hence, a relevant context for this research (Kalantari et al., 2023). The final sample comprised 251 respondents, exceeding the minimum of 204 recommended by a G*Power (v3.1.9.7) analysis ($f^2=0.10$, $\alpha=0.05$, power=0.95, five predictors), thereby ensuring robust statistical power, suitable for PLS-SEM analysis.

The sample population for this study comprises tourists visiting Malaysia. Tourists in Malaysia represent a diverse range of backgrounds, cultures, and travel motivations, making them an ideal sample for examining the dynamics of Islamic tourism. Additionally, Malaysia is a prominent Islamic tourism destination with a rich Islamic cultural heritage and well-developed Islamic infrastructure, making it a relevant and informative research paper for understanding sustainable Islamic tourism development. Table 1 shows the demographic profile of the 251 respondents.

The current study used a purposive sampling technique, and the respondents

who met the study criteria were included. The purposive sampling allows researchers to collect data from the participants who have appropriate characteristics for the current study, which helps in meaningful analysis. Although non-probability sampling can limit the generalisability, it is considered appropriate to get context-specific and targeted insight. The measurement validity of all constructs was adapted from well-established and validated scales from extensive studies. Further, content validity of the instrument was ensured through expert review and statistical measures were used to check the reliability of the instrument.

Table 1 details the demographic profile of the 251 respondents. The sample shows a balanced gender distribution and a mature age profile, with the largest group aged 36-45 (26.3%). Educational backgrounds are highly diverse, with 71.3% holding higher education degrees. Travel behaviour is also evenly distributed, capturing a wide spectrum of novices to avid travellers, ensuring a highly representative sample. The study did not include demographic control variables in the structural model, as the analysis was designed to test theory-driven relationships among the focal constructs. Nevertheless, respondent characteristics such as age, education, and travel frequency were reported descriptively to provide sample context. The omission of control variables is acknowledged as a limitation and direction for future model refinement.

Table 1
Demographic profile (n = 251)

		N	%
Gender	Male	79	31.5
	Female	89	35.5
	Prefer Not to Say	83	33.1
Age Group	18-25 years	41	16.3
	26-35 years	41	16.3
	36-45 years	66	26.3
	46-55 years	49	19.5
	56 and above	54	21.5
	High School or below	72	28.7
Educational Background	Bachelor's Degree	63	25.1
	Master's Degree	57	22.7
	Doctorate or Professional Degree	59	23.5
Travel Frequency in the Last Year	1-2 trips	61	24.3
	3-5 trips	74	29.5
	6-10 trips	63	25.1
	More than 10 trips	53	21.1
Travel Experience	Novice traveler (1-2 trips in the last year)	68	27.1
	Occasional traveler (3-5 trips in the last year)	57	22.7
	Frequent traveler (6-10 trips in the last year)	60	23.9
	Avid traveler (more than 10 trips in the last year)	66	26.3

Measures

In Zulvianti et al.'s (2022) view, tourist satisfaction is a favourable assessment formed during and after tourism activities. Accordingly, Muslim tourist satisfaction is conceptualised as an affective, evaluative judgment of the overall experience. Four items were adapted from Zulvianti et al. (2022) using a 5-point Likert scale, for example,

I had a pleasant experience during my visit to Malaysia.

Economic sustainability, defined by Mamirkulova et al. (2020), is the ability

of an economic system or activity to persist throughout time, guaranteeing long-term viability and continuous benefits for both current and future generations. Five measures were taken from Mamirkulova et al. (2020) based on a 5-point Likert scale. For example,

Tourism generates employment opportunities and benefits in the area.

Environmental sustainability is defined by Mamirkulova et al. (2020) as the conscientious and equitable management of ecosystems, natural resources, and environmental processes. Four measures

were taken from Mamirkulova et al. (2020) based on a 5-point Likert scale. Such as,

Tourism will provide waste management.

Sociocultural sustainability, as described by Mamirkulova et al. (2020), is the focus on maintaining and improving the well-being of societies and cultural identities while guaranteeing equal opportunity for all members. Seven measures were taken from Mamirkulova et al. (2020) based on a 5-point Likert scale. For example,

Tourism increases the empowerment of local communities.

According to Megeirhi et al. (2020), Islamic cultural heritage is a broad concept that encompasses values, shared beliefs, traditions, artefacts, and rituals that have been passed down through the ages. Seven measures were taken from Megeirhi et al. (2020) based on a 5-point Likert scale. Such as,

I feel enriched by the provided information on our Islamic cultural heritage.

Mamirkulova et al. (2020) defined infrastructure development as the process of organising and erecting necessary physical buildings and facilities to promote community well-being and economic progress. Five measures were taken from Mamirkulova et al. (2020) based on a 5-point Likert scale. For instance,

I appreciate Malaysia's infrastructure upgrades, ensuring safer and higher-quality public transportation.

Domínguez-Quintero et al. (2020) defined Islamic architecture as the artistic manifestation of cultural and religious principles, featuring calligraphy with deep roots in Islamic traditions and beliefs, as well as elaborate geometric designs and arabesques. Five measures were taken from Domínguez-Quintero et al. (2020) based on a 5-Point Likert scale. For instance,

The overall architecture and impression of the buildings provide inspiration, reflecting the beauty of Islamic architecture.

Sustainability in tourism development is defined by Zulvianti et al. (2022), as a conscientious planning and management techniques that give social inclusion, environmental preservation, and economic feasibility top priority. Five measures were taken from Zulvianti et al. (2022) based on a 5-Point Likert scale. For instance,

Community support for sustainable tourism in Malaysia.

Data Collection

The survey used a Likert scale with a 5-point rating method for the purpose of getting an insight into visitor perceptions and satisfaction in relation to the different components in Malaysia (Taherdoost, 2019). The Likert scale makes it possible for respondents to demonstrate their attitude towards a subject in a spectrum of strongly

disagree to strongly agree, which gives a finer detail of their opinion. Using this method, researchers can do a systematic data collection as well as an analysis that will eventually enable them to comprehend the experience and preferences of the tourists visiting Malaysia (Jebb et al., 2021).

Data Analysis

Hair et al. (2017) argue that PLS-SEM evaluates the extent to which predictor constructs explain variance in endogenous constructs and assesses relationships among latent variables. With PLS-SEM, researchers can estimate complex models that include many indicators, higher-order constructs, formative measures, and mediating effects using ordinal data (Hair et al., 2019). In the current study, the PLS-SEM algorithm was used to estimate measurement and structural models.

Before evaluating the structural model, collinearity was assessed through inner-model and full collinearity VIF values, all of which were below the recommended threshold, indicating no serious multicollinearity concerns (Hair et al., 2019). Common method bias was assessed using both Harman's single-factor test and the full collinearity VIF approach. Harman's test indicated that no single factor accounted for most of the covariance, while the full collinearity VIF values further suggested that common method bias was unlikely to threaten the model estimates; these VIF values are reported in Table 2.

RESULTS

Measurement Model

The measurement model assesses factor loadings, signal variances, and other important parameters to identify the relationship between the latent factors and observed variables (Yun & Kurniawan, 2023). Table 2 presents the results of the measurement model using the PLS algorithm technique.

Table 2 provides the relationship of the latent variables like CH, ECS, EnS, and OI, observing these. The loading factor estimates the relationship between the observed variable and its latent intended variable (Jackson, 1966). Statistical significance is well demonstrated with P-values of 0.000 and all loadings directly linked to their respective latent variables. The constructs have good internal consistency, reliability and convergent validity, according to Composite Reliability (CR) and Average Variance Extracted (AVE) values. This shows that the measurement model fits well, with strong relationships between non-observable and observable variables, and that the measurement framework is reliable and authentic.

Discriminant Validity

The discriminant validity table shows how distinct latent constructs in a measurement model are by showing correlations or covariances and ensuring they are lower than the square roots of the average variance extracted (AVE) (Fornell & Larcker, 1981). Table 3 provides the result of (Fornell & Larcker, 1981) criterion for discriminant validity assessment.

Table 2
Measurement model

	VIF	Loadings	Prob.	Alpha	CR	AVE
CH4 <- CH	2.52	0.893	0.000	0.812	0.884	0.718
CH5 <- CH	1.86	0.747	0.000			
CH7 <- CH	2.54	0.894	0.000			
ECS3 <- ECS	1.72	0.783	0.000	0.762	0.863	0.678
ECS4 <- ECS	1.95	0.855	0.000			
ECS5 <- ECS	1.89	0.831	0.000			
ES1 <- EnS	2.63	0.962	0.000	0.877	0.940	0.887
ES2 <- EnS	2.58	0.921	0.000			
IAA4 <- IAA	2.74	0.945	0.000	0.881	0.944	0.894
IAA5 <- IAA	2.76	0.946	0.000			
ID1 <- ID	2.79	0.959	0.000	0.916	0.960	0.922
ID4 <- ID	2.77	0.962	0.000			
SCS5 <- SCS	2.41	0.946	0.000	0.873	0.921	0.798
SCS6 <- SCS	2.38	0.941	0.000			
SCS7 <- SCS	1.84	0.783	0.000			
TS1 <- TSAT	2.78	0.959	0.000	0.960	0.971	0.892
TS2 <- TSAT	2.67	0.950	0.000			
TS3 <- TSAT	2.69	0.951	0.000			
TS4 <- TSAT	2.42	0.918	0.000			

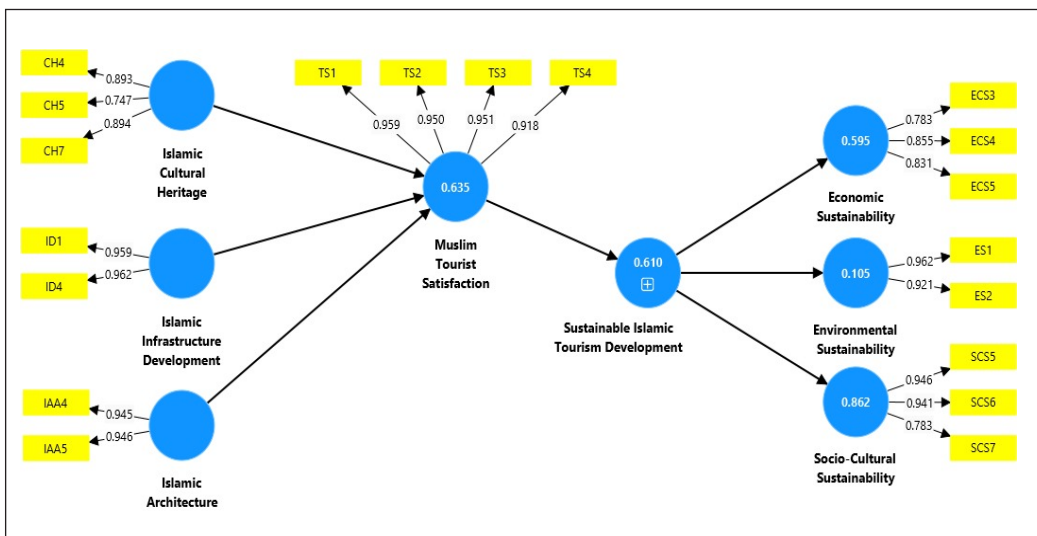


Figure 2. PLS Algorithm using SmartPLS v4

Table 3
Fornell-Larcker Criterion (FLC)

	CH	ECS	EnS	IAA	ID	SCS	TSAT
CH	0.847						
ECS	0.224	0.823					
EnS	0.266	-0.102	0.942				
IAA	0.639	0.322	0.381	0.945			
ID	0.641	0.446	0.347	0.641	0.960		
SCS	0.674	0.539	0.265	0.467	0.636	0.893	
TSAT	0.672	0.500	0.451	0.725	0.679	0.726	0.945

Fornell and Larcker (1981) suggested that the square root of the average of latent constructs (shown by bold values) should be greater than the correlation with other constructs (indicated by non-bold values). The diagonal values representing the square root of the Average Variance Extracted (AVE) for each construct surpass the correlations with other constructs, indicating that each latent variable is more strongly related to its corresponding observed variables than to those representing different constructs. However, the presence of some relatively high correlations between constructs suggests potential overlap (Yun & Kurniawan, 2023). If a construct has shown its uniqueness inside the structural model, the square root of its average variance extracted (AVE) coefficient will be larger than its correlation coefficient with other constructs, as stated by (Fornell & Larcker, 1981). This is demonstrated in the table provided above. FLC has been used to establish discriminant validity. Table 4 shows the result of HTMT ratios for each pair of constructs to assess discriminant validity using PLS algorithm.

Table 4 indicates that the HTMT values among the first-order constructs are below the conventional threshold of 0.90, supporting discriminant validity at that level (Ab Hamid et al., 2017; Henseler et al., 2016b). However, the HTMT value of 0.933 observed between SCS and the higher-order construct SITD indicates substantial conceptual proximity, which is theoretically plausible because SCS is one of the reflective dimensions of SITD. Accordingly, this result is interpreted with caution as a higher-order construct issue rather than straightforward evidence of problematic overlap between unrelated constructs.

Predictive Power

Table 5 shows the predictive power of the endogenous latent constructs in the structural model using R-squared estimations.

Table 5 shows that sustainable Islamic tourism development has been predicted at up to 61 per cent, representing strong predictability in the structural model (Chin, 1998; Cohen, 1988, 1992) while Muslim tourist satisfaction has been strongly predicted up to 63.5 per cent (Hair et al., 2011) in the structural model.

Table 4
HTMT ratio

	CH	ECS	EnS	IAA	ID	SCS	TSAT
CH							
ECS	0.330						
EnS	0.313	0.132					
IAA	0.707	0.393	0.441				
ID	0.701	0.533	0.392	0.716			
SCS	0.818	0.608	0.303	0.522	0.707		
TSAT	0.712	0.581	0.480	0.788	0.721	0.778	

Table 5
Predictive power

	R-Square	Decision
Sustainable Islamic Tourism Development	0.610	Strong
Muslim tourist satisfaction	0.635	Strong

Structural Model

The structural model shows how latent factors in a measurement model affect each other and observable variables (Bentler, 1990). In this regard, Table 6 shows the result of higher-order construct development using PLS path modelling analysis.

Table 6 showed that the first-order constructs of economic sustainability (ECS; $\beta = 0.771$; $p < 0.05$), environmental sustainability (EnS; $\beta = 0.323$; $p < 0.05$) and socio-cultural sustainability (SCS; $\beta = 0.928$; $p < 0.05$) have positively and statistically significantly reflected from the higher-order construct of sustainable Islamic tourism development. Table 7 shows the results of hypothesis testing for direct-effect analysis using PLS bootstrapping.

Table 7 shows that Islamic cultural heritage (CH; $\beta = 0.248$; $p < 0.05$) and Islamic infrastructure development

(ID; $\beta = 0.265$; $p < 0.05$) have a positively significant effect on Muslim tourist satisfaction, while Islamic architecture (IAA; $\beta = 0.397$; $p < 0.05$) has a positively significant effect on Muslim tourist satisfaction. Contrarily, Muslim tourist satisfaction (TSAT; $\beta = 0.781$; $p < 0.05$) has a significantly positive effect on sustainable Islamic tourism development.

Figure 3 shows the framework of PLS bootstrapping while Table 8 shows the results of hypothesis testing for specific indirect-effect analysis using PLS bootstrapping.

Table 8 showed that Islamic cultural heritage (CH; $\beta = 0.194$; $p < 0.05$) and Islamic infrastructure development (ID; $\beta = 0.207$; $p < 0.05$) have a positively significant effect on sustainable Islamic tourism development with the mediation of Muslim tourist satisfaction while Islamic architecture (IAA; $\beta = 0.310$; $p < 0.05$) has

a positively significant effect on sustainable Islamic tourism development with the mediation of Muslim tourist satisfaction.

Predictive Relevance

Table 9 shows the predictive relevance of the endogenous constructs in the structural

model using PLS Predict for Q-Square estimations.

Table 9 showed that sustainable Islamic tourism development has a strong relevance of 43 percent while Muslim tourist satisfaction has a strong relevance of 62.3 percent in the structural model (Hair et al., 2013).

Table 6
Higher-order construct development

	Estimate	S. D.	t-Stats	Prob.
SITD -> ECS	0.771	0.054	14.196	0.000
SITD -> EnS	0.323	0.134	2.420	0.016
SITD -> SCS	0.928	0.008	110.002	0.000

Table 7
Direct-effect analysis

	Estimate	S. D.	t-Stats	Prob.
CH -> TSAT	0.248	0.056	4.405	0.000
IAA -> TSAT	0.397	0.061	6.547	0.000
ID -> TSAT	0.265	0.087	3.044	0.002
TSAT -> SITD	0.781	0.037	21.258	0.000

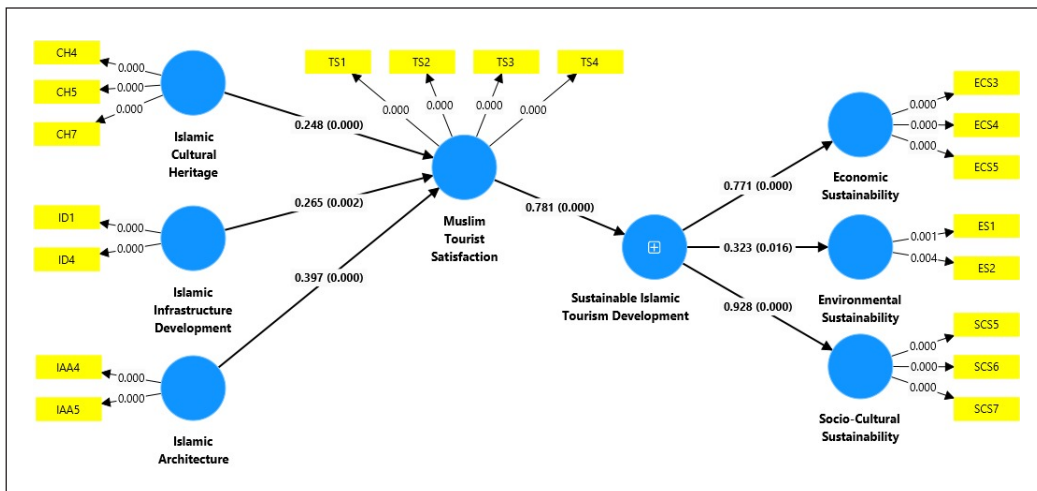


Figure 3. PLS Bootstrapping using SmartPLS v4

Table 8
Specific indirect-effect analysis

	Estimate	S. D.	t-Stats	Prob.
CH -> TSAT -> SITD	0.194	0.044	4.393	0.000
IAA -> TSAT -> SITD	0.310	0.046	6.768	0.000
ID -> TSAT -> SITD	0.207	0.072	2.861	0.004

Table 9
Predictive relevance

	Q-Square	Decision
Sustainable Islamic Tourism Development	0.430	Strong
Muslim Tourist Satisfaction	0.623	Strong

DISCUSSION

Beyond statistical significance, the findings indicate that Islamic architecture exerts the strongest direct influence on Muslim tourist satisfaction, followed by Islamic infrastructure development and Islamic cultural heritage. This pattern suggests that tourists respond not only to symbolic and historical meaning, but also to visible, experience-rich destination attributes that shape their immediate evaluation of the trip. In the Malaysian context, this implies that architectural expression and infrastructure readiness may be especially consequential for strengthening satisfaction and, indirectly, sustainable tourism outcomes.

The result showed that Islamic cultural heritage has a positive and significant effect on Muslim tourist satisfaction. This result fits with the idea that cultural sites are often the most important parts of travel. Additionally, to their historical and appealing value, Islamic cultural heritage places evoke feelings and offer chances

to learn and explore, which ultimately increases total satisfaction. Similar studies in tourist literature have drawn the same conclusion. In their study of European sites, Domínguez-Quintero et al. (2021) also found a link between Islamic cultural heritage and Muslim tourist satisfaction that was satisfactory. The positive impact of Islamic cultural heritage on Muslim tourist satisfaction was also supported by Rasoolimanesh et al. (2022), who studied in Asian environments. Altogether, this research shows how significant Islamic cultural heritage is for making tourist trips memorable and increasing satisfaction.

The result highlighted that Islamic architecture has a positive and significant effect on Muslim tourist satisfaction. Although tourists may enjoy the beauty of Islamic artefacts and architecture, the service quality is also among the major determinants of the overall feeling of the visitors to the site. Hence, the multiple criteria comprise just some of the factors that make up the

overall picture of location management, because of which strategies need to be produced, considering the significance of these factors. This evaluation showed that tourists' satisfaction with the Buddhist art had little but also equally important effects on their views regarding the cultural element, thus pointing to the multifaceted nature of their perspectives, other than the cultural influence factor (Petrucci, 2023). In addition, similar findings were also discovered among Europeans in research that studied the effect of historical sites on Muslim tourist satisfaction (Kamani et al., 2022).

The result showed that Islamic infrastructure development has a positive and significant effect on Muslim tourist satisfaction, which is in line with other studies. The architecture of such infrastructure plays a significant role in improving the overall quality and experience of the tourists, resulting in very high levels of satisfaction. Moreover, another study by Syam (2022) affirmed that infrastructure as a factor that affected the perceptions and satisfaction levels of tourists, was presented. Following these findings, a study by Chan et al. (2022b) highlighted also the very large infrastructure role in attracting and keeping customers.

The result found that Muslim tourist satisfaction has a positive and significant effect on sustainable Islamic tourism development. This consequence's reason comes from the idea that contented visitors are more likely to act in a form that is helpful to the environment and culture, which is profitable for the Islamic tourism destination over long term. This argument

is substantiated by Zulvianti et al. (2022) finding that there exists a positive correlation between the long-term trend of growth in the tourism sector in Jordan and the number of tourists who are satisfied with their visit. Along with this, Hassan et al. (2023) noted through their research on Islamic tourism in Malaysia that the industry's applications and endorsement of sustainable growth techniques are highly affected by tourists' satisfaction.

The result showed that Muslim tourist satisfaction has a mediating effect between Islamic cultural heritage and sustainable Islamic tourism development. Firstly, Muslim tourist satisfaction is impacted by Islamic cultural heritage sites, which are often major draws for tourists. Secondly, Tourists who have a happy experience for themselves are the ones who tend to be moderate and adhere to ecotourism compared to another group. This indicates the positivity of this by the fact that investing in cultural values helps in the better pursuit of sustainable development, in which tourists take part by increasing customer satisfaction. In light of the delayed-sequence model presented, the review literature argues that the mediation process between Islamic cultural heritage and sustainable tourism may also exist. Likewise, Jebbouri et al. (2022) looked at Islamic cultural heritage and sustainable tourism and discovered a similar mediation impact. The importance of Islamic contentment in encouraging sustainable tourism results was reaffirmed by Zulvianti et al. (2022)'s analysis of Islamic tourist development, which showed a similar association.

The result found that Muslim tourist satisfaction has a mediating effect between Islamic architecture and sustainable Islamic tourism development. The religious architecture in the Islamic countries is so unique and creative that it leaves the tourists satisfied, therefore they are most likely to continue visiting the Islamic countries more times soon time. The findings revealed by Azizi and Moghadam Barati (2022) stated that the components of Islamic cultural heritage are key in determining the degree of success in satisfying travellers and influencing further sustainable tourism development. Nevertheless, the relationships between cultural attractions in the Islamic historical sites and the sustainable development were also identified as more attractive to tourists, thereby leading to their satisfaction and happiness. In a similar vein, et al. (2022) discovered that the association between cultural attractions and sustainable tourism development in Islamic places was mediated by Muslim tourist satisfaction.

The result indicated that Muslim tourist satisfaction has a mediating effect between Islamic infrastructure development and sustainable Islamic tourism development. The facility of Islamic eco-destination development is very crucial in increasing the Muslim tourist satisfaction. This outcome corroborates the previous job of Jebbouri et al. (2022), who discovered that the association between Islamic infrastructure development and tourism sustainability was mediated by Muslim tourist satisfaction. Similar findings were made by Juliana et al. (2022), who stressed the role of

infrastructure in enhancing Muslim tourist satisfaction and motivating sustainable tourism practices in an Islamic scenario.

The current study findings show that Islamic cultural heritage, Islamic infrastructure development and Islamic influence on tourist satisfaction provide a meaningful and significant pattern in the study context. The result of this study also provides empirical support to the framework and strengthens the main study arguments. Overall, findings are aligned with prior studies and integrated practical, theoretical and empirical implications. Additionally, it strengthens the significant relationship among studied variables and contribute in long term sustainable Islamic tourism development, cultural preservation and destination competitiveness.

This study provides guidance to the tourism planner and policymakers by indicating strategic investment in Islamic infrastructure and cultural heritage, which may enhance tourist satisfaction and long-term development of the destination. For instance, saving Islamic heritage sites and integrating architectural elements in tourism can encourage tourists to revisit and enhance their attractiveness, which ultimately helps local communities. Lastly, this study theoretical contribute by empirically examining destination-specific attributes of Islamic tourism that are necessary for sustainable tourism.

Recommendations

Firstly, the government and concerned stakeholders should make sure that the

protection and promotion of Islamic cultural heritage sites is a top priority. This is accomplished by taking steps to protect the historical places, religious sites, and the local traditions that make these places unique and their entire culture meaningful. However, the fact that this way of thinking improves the number of tourists the Islamic cultural heritage attracts, it eventually helps local people feel a greater degree of civic pride and connection. Furthermore, one must also work to promote the understanding of the Islamic culture's worth in tourism. Certainly, educational programs, guided tours, and the creation of advertisements can make a lot of difference in making the unique features of Islamic history known and the fact that they are relevant to present-day tourism. An appropriate setting for sustainable tourism centred on the preservation and protection of priceless factors for posterity can be created by paying attention to the variety and depth of the cultures of Islamic communities.

Since the expansion of Islamic tourist destinations is a key to the development of the infrastructure, it shall be given more importance. As for the accessibility and convenience of the tourist sites, the ways could be improved by enhancing transport networks, offering alternative accommodation, and improving the tourist destinations. Modern airport facilities, the road networks, and public transport could be important grounds for enhancing the link between different locations and improving the travel experience for visitors. Moreover, it is equally crucial to concentrate on the development of

green infrastructure in line with the values enshrined in the practices of modern-day Islam as well. With ecologically conceived architectural designs and technologies that ensure a high standard and efficient use of energy, the environmental impact of hotels, restaurants, and other recreational facilities can be dramatically reduced while tourists' experience is upgraded as well. Together with cultural attractions, the contents of the excursions are to be expanded, including ecotourism, adventure tourism, and gastronomic experiences in respect to Islamic ideals. Thus, diversification of tourism involves the development of new products and, at the same time, a broader cast of the audience while yet respecting the cultural expectations of citizens.

This study suggests that strengthening infrastructure, architecture and Islamic cultural heritage not only contributes to sustainable tourism but also develops across economic, socio-economic, and environmental dimensions. The preservation of Islamic heritage sites supports cultural conservation and resource management from an environmental perspective. Economically, a better experience of Muslim tourists can increase satisfaction, enhance tourist arrival which ultimately generate revenue. From a socio-economic perspective, Islamic tourism can encourage community participation, improve overall well-being, and create employment opportunities. Therefore, strategic investment plays a vital role in improving tourist satisfaction and promoting sustainable Islamic tourism.

More so, it is vital to develop international networks and alliances for the purpose of creating a platform for the exchange of best practices, cross-cultural learning, and attaining global audiences for the places which have adopted Islamic tourism. With such efforts as cooperation marketing, cultural exchanges and joint research, the international attraction and awareness of Islamic tourism can be realised on a world scale. The need for sustainability is crucial; therefore, in the tourism projects, there should be integration of the sustainability strategies into the processes that will help to maximise the benefits and minimise the negative environmental and people impacts of tourism. Integrating these policies will make them also among the first-choice locations for a sustainable tourism experience with protected nature for the upcoming generations.

Limitations and Future Research

Even though this study is useful, it has some limitations. Firstly, the 5-point Likert scale survey methodology may narrow understanding and make it too shallow to completely comprehend the multifaceted perspectives of tourists. The research that focused on Muslim tourist satisfaction as the substantial intermediary could have overlooked other socio-economic characteristics of the area, which might have a significant impact on the course of sustainable Islamic tourism development (López-Sanz et al., 2021). Moreover, even though PLS-SEM serves as a complementary study tool, other methods are more

trustworthy in terms of causal correlations development (Chan et al., 2022a). Other, it is worthy to note that the study's unique focus on Malaysia can narrow the applicability of its conclusions to destinations beyond this place. To obtain a deep knowledge about the tourists' impressions of tourism, future research would have to circumvent these barriers by utilising a mixed-method approach that involves quantitative and qualitative methods (Castillo Canalejo et al., 2022).

In addition, further studies can be enhanced by incorporating multiple drivers, for example, the marketing of destinations or green practices related to the environment (Monoarfa et al., 2022). Future studies can test whether satisfaction can be a moderator or integrate the concepts of the leadership model of destination governance or the theory of planned behaviour which move beyond theories of social exchange and equity theory, may help develop a more nuanced and well-constructed theoretical framework of sustainable Islamic tourism (Fathan et al., 2022).

CONCLUSION

Islamic cultural heritage and Islamic infrastructure development were found to be some major variables affecting the level of Muslim tourist satisfaction, demonstrating that the right strategies of preserving the cultural sites and providing approaches which meet the demand of tourists are highly appreciated. However, the indirect effects of Islamic architecture, which turned out to have no direct influence on Muslim tourist

satisfaction, were nonetheless an important element which gained significance in the sustainable Islamic tourism development through Muslim tourist satisfaction. It points to the fact that Muslim tourist satisfaction is complex and that the different components, which somehow contribute differently to the findings, have a combined effect on evaluating the findings of tourists. Moreover, the study highlights the pivotal role of Muslim tourist satisfaction as a mediator between various factors and sustainable Islamic tourism development. Muslim tourist satisfaction was found to significantly mediate the effects of Islamic cultural heritage, Islamic infrastructure development, and Islamic architecture on sustainable tourism development. It also highlights the importance of providing a fulfilled and positive experience to tourists as the main driver of the Islamic tourism sector's sustainability.

For practical reasons, the learnings arising from the study findings are very valuable to the officials at the policymaking level and to the industry practitioners. The most important thing is that allotting the funds for building the hotels, restaurants and leisure places and managing them can shape the whole holidays in their country. Thus, it inevitably causes tourists to have better satisfaction ratings, which eventually results in the sustainable development of the Islamic tourism industry. Besides, these findings provide a holistic approach that integrates cultural preservation, Islamic infrastructure development and the celebration of Islamic architecture to produce flavorful and vital tourist experiences.

ACKNOWLEDGEMENT

We thank all participants who voluntarily contributed to this study. We equally wish to thank Asia Pacific University of Technology & Innovation, Kuala Lumpur, for providing a well-stocked library where several of the literature for these studies were sourced and for publication support.

Ethical Considerations and Informed Consent

The study was conducted in accordance with established ethical guidelines for social science research. Participants were assured of confidentiality and anonymity, and no personally identifiable information was collected. Ethical clearance was obtained from the relevant Research Ethics Committee, and informed written consent was secured from all participants for the academic use of their data. Consent was obtained from all participants included in the study.

Funding

The authors declare that no funding was received for the preparation of this manuscript and the study.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Data Availability Statement

The datasets generated during and/or analysed during the current study are

available from the corresponding author on reasonable request.

REFERENCES

- Ab Hamid, M. R., Sami, W., & Sidek, M. H. M. (2017). Discriminant validity assessment: Use of Fornell and Larcker criterion versus HTMT criterion. *Journal of Physics: Conference Series*, 890, Article 012163. <https://doi.org/10.1088/1742-6596/890/1/012163>
- Abbasian, S., Onn, G., & Nordberg, D. (2024). The perception of halal concept of hoteliers in the light of social exchange theory: A Swedish study. *Journal of Hospitality and Tourism Insights*, 7(4), 2403–2421. <https://doi.org/10.1108/JHTI-01-2023-0038>
- Abror, A., Patrisia, D., Engriani, Y., Wardi, Y., Hamid, R. S., Najib, M., Anuar, M. M., Battour, M., & Ratnasari, R. T. (2023). Antecedents of Muslim tourist loyalty: The role of Islamic religiosity and tourist value co-creation. *Cogent Business & Management*, 10(2), Article 2247871. <https://doi.org/10.1080/23311975.2023.2247871>
- Adams, J. S. (2015). Equity theory. In J. B. Miner (Ed.), *Organisational behaviour 1: Essential theories of motivation and leadership* (pp. 134–158). Routledge. <https://doi.org/10.4324/9781315702018-11>
- Al-Ansi, A., Olya, H., & Han, H. (2023). Two decades of research on halal hospitality and tourism: A review and research agenda. *International Journal of Contemporary Hospitality Management*, 35(6), 2017–2055. <https://doi.org/10.1108/IJCHM-12-2021-1515>
- Alkhalifah, E., Hammady, R., Abdelrahman, M., Darwish, A., Cranmer, E., Al-Shamaileh, O., Moro, S., Martins, J., & Jung, T. (2025). Virtual reality's impact on tourist attitudes in Islamic religious tourism: The role of emotional attachment and VR presence. *Human Behaviour and Emerging Technologies*, 2025, Article 8818559. <https://doi.org/10.1155/hbe2/8818559>
- Al Khalifa, H. E., & Lafi, M. W. (2025). Ornamentation and Islamic identity in contemporary European mosques: An analysis of cultural, aesthetic, and functional dimensions and modern influences. *Buildings*, 15(8), Article 1302. <https://doi.org/10.3390/buildings15081302>
- Arabov, N., Nasimov, D., Janzakov, B., Khomitov, K., Utemuratova, G., Abduraimov, D., & Ismailov, B. (2024). Shaping the future of Uzbekistan's tourism: An in-depth analysis of infrastructure influence and strategic planning. *Journal of Eastern European and Central Asian Research*, 11(1), 53–65. <https://doi.org/10.15549/jeeecar.v11i1.1478>
- Azizi, F., & Moghadam Barati, Z. (2022). Investigation of the role of the architectural quality of traditional resorts in Yazd City in the creation of tourist satisfaction with the mediating role of perceived value of the building architecture. *Armanshahr Architecture & Urban Development*, 15(40), 149–162. <https://doi.org/10.22034/aaud.2021.253538.2337>
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, 107(2), 238–246. <https://doi.org/10.1037/0033-2909.107.2.238>
- Castillo Canalejo, A. M., Sánchez Cañizares, S. M., Muñoz-Fernández, G. A., & Márquez, C. M. (2023). Tourists' satisfaction with gastronomy: Perceptions of restaurateurs in Córdoba and Oxford. In *Tourism and Hospitality Industry 2023* (pp. 29–43). University of Rijeka, Faculty of Tourism and Hospitality Management. <https://doi.org/10.20867/thi.26.6>
- Chan, W.-C., Wan Ibrahim, W. H., Lo, M.-C., Mohamad, A. A., Ramayah, T., & Chin, C.-H. (2022a). Controllable drivers that influence tourists' satisfaction and revisit intention to Semenggoh Nature Reserve: The moderating impact of destination image. *Journal of Ecotourism*, 21(2), 147–165. <https://doi.org/10.1080/14724049.2021.1925288>

- Chan, W.-C., Lo, M.-C., Wan Ibrahim, W. H., Mohamad, A. A., & Suaidi, M. K. (2022b). The effect of hard infrastructure on perceived destination competitiveness: The moderating impact of mobile technology. *Tourism Management Perspectives*, 43, Article 100998. <https://doi.org/10.1016/j.tmp.2022.100998>
- Chaturvedi, P., & Ranjan, A. (2026). The role of smart technologies in regenerating religious tourism. In *Design, adoption, and impact of human-centred technologies* (pp. 261–288). IGI Global Scientific Publishing. <https://doi.org/10.4018/979-8-3373-9958-4.ch008>
- Cheraghi, E., Ghaderi, Z., Dehghan Pour Farashah, M., & Rudolf, W. (2026). Cross-cultural interactions in religious tourism: A stakeholder perspective during a spiritual event. *International Journal of Tourism Cities*, 12(1), 238–256. <https://doi.org/10.1080/20565607.2025.2564436>
- Chin, W. W. (1998). Commentary: Issues and opinion on structural equation modelling. *MIS Quarterly*, 22(1), vii–xvi.
- Cohen, J. (1988). *Statistical power analysis for the behavioural sciences* (2nd ed.). Lawrence Erlbaum Associates.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155–159. <https://doi.org/10.1037/0033-2909.112.1.155>
- Domínguez-Quintero, A. M., González-Rodríguez, M. R., & Paddison, B. (2020). The mediating role of experience quality on authenticity and satisfaction in the context of cultural-heritage tourism. *Current Issues in Tourism*, 23(2), 248–260. <https://doi.org/10.1080/13683500.2018.1502261>
- Domínguez-Quintero, A. M., González-Rodríguez, M. R., & Roldán, J. L. (2021). The role of authenticity, experience quality, emotions, and satisfaction in a cultural heritage destination. In D. Chhabra (Ed.), *Authenticity and authentication of heritage* (pp. 103–117). Routledge. <https://doi.org/10.4324/9781003130253-9>
- Fathan, F. B., Mustahal, M., & Basit, A. (2022). Halal tourism as a means of empowering the people's economy. *International Journal of Social Science and Religion*, 3(1), 21–42. <https://doi.org/10.53639/ijssr.v3i1.57>
- Fauzi, M. A., & Battour, M. (2025). Halal and Islamic tourism: Science mapping of present and future trends. *Tourism Review*, 80(5), 1156–1170. <https://doi.org/10.1108/TR-08-2023-0533>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.1177/002224378101800104>
- Hair, J. F., Hollingsworth, C. L., Randolph, A. B., & Chong, A. Y. L. (2017). An updated and expanded assessment of PLS-SEM in information systems research. *Industrial Management & Data Systems*, 117(3), 442–458. <https://doi.org/10.1108/IMDS-04-2016-0130>
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139–152. <https://doi.org/10.2753/MTP1069-6679190202>
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modelling: Rigorous applications, better results and higher acceptance. *Long Range Planning*, 46(1–2), 1–12. <https://doi.org/10.1016/j.lrp.2013.01.001>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hair, J. F., Jr., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: Updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107–123. <https://doi.org/10.1504/IJMDA.2017.087624>

- Hanafiah, M. H., Hasan, M. R., & Mat Som, A. P. (2022). Managing modern Muslim travellers: Emerging trends and issues for Islamic tourism destinations. *Tourism and Hospitality*, 3(4), 908–918. <https://doi.org/10.3390/tourhosp3040058>
- Hassan, N. M., Khan, S. A. R., Ashraf, M. U., & Sheikh, A. A. (2023). Interconnection between the role of blockchain technologies, supply chain integration, and circular economy: A case of small and medium-sized enterprises in Pakistan. *Science Progress*, 106(3), Article 00368504231186527. <https://doi.org/10.1177/00368504231186527>
- Henseler, J., Hubona, G., & Ray, P. A. (2016a). Using PLS path modelling in new technology research: Updated guidelines. *Industrial Management & Data Systems*, 116(1), 2–20. <https://doi.org/10.1108/IMDS-09-2015-0382>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2016b). Testing measurement invariance of composites using partial least squares. *International Marketing Review*, 33(3), 405–431. <https://doi.org/10.1108/IMR-09-2014-0304>
- Homans, G. C. (1974). *Social behaviour: Its elementary forms* (Rev. ed.). Harcourt Brace Jovanovich.
- Jebb, A. T., Ng, V., & Tay, L. (2021). A review of key Likert scale development advances: 1995–2019. *Frontiers in Psychology*, 12, Article 637547. <https://doi.org/10.3389/fpsyg.2021.637547>
- Jebbouri, A., Zhang, H., Imran, Z., Iqbal, J., & Bouchiba, N. (2022). Impact of destination image formation on tourist trust: Mediating role of tourist satisfaction. *Frontiers in Psychology*, 13, Article 845538. <https://doi.org/10.3389/fpsyg.2022.845538>
- Juliana, J., Putri, F. F., Wulandari, N. S., Saripudin, U., & Marlina, R. (2022). Muslim tourist perceived value on revisit intention to Bandung city with customer satisfaction as intervening variables. *Journal of Islamic Marketing*, 13(1), 161–176. <https://doi.org/10.1108/JIMA-08-2020-0245>
- Kalantari, H. D., Jopp, R., Gholipour, H. F., Lim, W. M., Lim, A. L., & Wee, L. L. M. (2023). Information source and tourist expenditure: Evidence from Sarawak, Malaysia. *Current Issues in Tourism*, 26(22), 3616–3650. <https://doi.org/10.1080/13683500.2022.2144154>
- Kamani, S. M. H., Sazgar, S., & Ahmadi, M. (2022). Examining the effect of urban elements in accordance with the Iranian-Islamic art in the absorption and satisfaction of tourists in Shiraz city. *Journal of Urban Planning and Management*, 13(48), 169–186. <https://doi.org/10.30495/jupm.2022.28299.3914>
- Khalid, M. A., Ab Rahman, S. A., & Bachok, S. (2023). Tourists' behaviour towards Islamic tourism characteristics in Kota Bharu, Malaysia. *Malaysian Journal of Social Sciences and Humanities*, 8(2), Article e002114. <https://doi.org/10.47405/mjssh.v8i2.2114>
- López-Sanz, J. M., Penelas-Lseguía, A., Gutiérrez-Rodríguez, P., & Cuesta-Valiño, P. (2021). Rural tourism and the sustainable development goals: A study of the variables that most influence the behaviour of the tourist. *Frontiers in Psychology*, 12, Article 722973. <https://doi.org/10.3389/fpsyg.2021.722973>
- Ma'asor @ Mansor, M. A., Mat Som, A. P., Yusof, Y., & Al Qassem, A. (2023). Level of Islamic attributes practices by Muslim-friendly hotel in Malaysia. *Planning Malaysia*, 21(25), Article 1229. <https://doi.org/10.21837/pm.v21i25.1229>
- Mamirkulova, G., Mi, J., Abbas, J., Mahmood, S., Mubeen, R., & Ziapour, A. (2020). New Silk Road infrastructure opportunities in developing tourism environment for residents' better quality of life. *Global Ecology and Conservation*, 24, Article e01194. <https://doi.org/10.1016/j.gecco.2020.e01194>
- Manosuthi, N., Fakfare, P., & Lee, J. (2026). Community vs tourist incentives design in ecotourism: Authenticity and engagement effects.

- Tourism Review*. Advance online publication. <https://doi.org/10.1108/TR-07-2025-0725>
- Mazlan, N., Izham, S. S. B., & Ahmadun, M. B. (2023). Muslim-friendly hotels as Islamic tourism products: Issues and challenges. *International Journal of Academic Research in Business and Social Sciences*, 13(2), 241–255. <https://doi.org/10.6007/IJARBS/v13-i2/16344>
- Megeirhi, H. A., Woosnam, K. M., Ribeiro, M. A., Ramkissoon, H., & Denley, T. J. (2020). Employing a value-belief-norm framework to gauge Carthage residents' intentions to support sustainable cultural heritage tourism. *Journal of Sustainable Tourism*, 28(9), 1351–1370. <https://doi.org/10.1080/09669582.2020.1738444>
- Mohsin, A., Rodrigues, H., Penela, D., & Luz, A. (2024). Is halal tourism taking off in OIC and non-OIC countries? A systematic study of published research. *Journal of Islamic Marketing*, 15(4), 990–1012. <https://doi.org/10.1108/JIMA-03-2023-0077>
- Monoarfa, H., Rahayu, A., Adirestuty, F., Abu Karim, R., Bahtar, A. Z., Ahmad Nazari, Z., & Mahmud, N. (2022). The influence of Islamic attributes on tourist satisfaction with pull motivation as an intervening variable. *International Journal of Tourism Cities*, 8(1), 140–152. <https://doi.org/10.1108/IJTC-10-2020-0229>
- Nigatu, T. F., Haider, E. A., & Ambaw, Z. G. (2023). Tourism potential and challenges for Islamic monastery heritage sites in Ethiopia: Tiru Sina Mosque. *International Journal of Religious Tourism and Pilgrimage*, 11(2), Article 9. <https://doi.org/10.21427/4M54-YA67>
- Peeters, P., Çakmak, E., & Guiver, J. (2024). Current issues in tourism: Mitigating climate change in sustainable tourism research. *Tourism Management*, 100, Article 104820. <https://doi.org/10.1016/j.tourman.2023.104820>
- Petrucci, C. (2023). *Thermal comfort in traditional and sustainable buildings: Comparative analysis of thermal perception in the Middle East and Southeast Asian buildings* [Master's thesis, Ca' Foscari University of Venice]. UNITESI. <https://unitesi.unive.it/handle/20.500.14247/13957>
- Phi, L. N., Phuong, D. H., & Huy, T. V. (2024). How perceived crowding changes the interrelationships between perceived value, Muslim tourist satisfaction and destination loyalty: The empirical study at Hoi An. *International Journal of Tourism Cities*, 10(1), 324–352. <https://doi.org/10.1108/IJTC-08-2023-0155>
- Rady, A., Abdelaziz, M., & Touni, R. D. (2023). The impact of price fairness on the perceived value and customer satisfaction under the exchange rate change in hotels in Egypt. *Journal of Association of Arab Universities for Tourism and Hospitality*, 25(2), 68–104.
- Rahman, M. K., Yaacob, M. R., Khaliq, M., & Adeiza, A. (2022). Analysing tourists' intention to revisit Islamic tourism destinations. *Middle East Journal of Management*, 9(1), 87–106. <https://doi.org/10.1504/MEJM.2022.119366>
- Rasoolimanesh, S. M., Seyfi, S., Rather, R. A., & Hall, C. M. (2022). Investigating the mediating role of visitor satisfaction in the relationship between memorable tourism experiences and behavioural intentions in heritage tourism context. *Tourism Review*, 77(2), 687–709. <https://doi.org/10.1108/TR-02-2021-0086>
- Rauf, A., Muhammad, N., Mahmood, H., & Yen, Y. Y. (2024). The influence of healthcare service quality on patients' satisfaction in urban areas: The case of Pakistan. *Heliyon*, 10(18), Article e37506. <https://doi.org/10.1016/j.heliyon.2024.e37506>
- Solomon, E. N. A., Braimah, S. M., Odoom, R., & Mensah, K. (2026). Storytelling in heritage tourism: The role of storytellers in shaping diasporic visitor experience and promoting Ghanaian heritage. *Tourism Critiques: Practice*

- and Theory*. Advance online publication. <https://doi.org/10.1108/TRC-06-2025-0029>
- Subawa, N. S., Mimaki, E. A., Mimaki, C. A., Baykal, E., & Utami, M. S. M. (2023). Exploring the hidden potential of Bali's wellness tourism: Which factors encourage tourists to visit? *Cogent Social Sciences*, 9(2), Article 2269722. <https://doi.org/10.1080/23311886.2023.2269722>
- Sutianto, S. A., Sidabutar, Y. F., & Sinaga, M. I. P. (2023). Development of historical and religious tourism in spatial planning towards the utilisation of local wisdom potentials in Penyengat Island. *JMKSP (Jurnal Manajemen, Kepemimpinan, dan Supervisi Pendidikan)*, 8(2), 395–411.
- Syam, R. (2022). Examining Muslim tourist satisfaction with tourism infrastructure in West Bandung District, West Java, Indonesia. *Fair Value: Jurnal Ilmiah Akuntansi dan Keuangan*, 4(Special Issue 4).
- Tabaeeian, R. A., Yazdi, A., Mokhtari, N., & Khoshfetrat, A. (2023). Host-tourist interaction, revisit intention and memorable tourism experience through relationship quality and perceived service quality in ecotourism. *Journal of Ecotourism*, 22(3), 406–429. <https://doi.org/10.1080/14724049.2022.2046759>
- Taherdoost, H. (2019). What is the best response scale for survey and questionnaire design: Review of different lengths of rating scale/attitude scale/Likert scale. *International Journal of Academic Research in Management*, 8(1), 1–10.
- Tan, C.-Y., & Soon, S.-V. (2023). Tourism demand for Malaysia: Further evidence from panel approaches. *Asia Pacific Management Review*, 28(4), 459–469. <https://doi.org/10.1016/j.apmrv.2022.12.006>
- Uslu, F., Yayla, O., Güven, Y., Ergün, G. S., Demir, E., Erol, S., Yıldırım, M. N. O., Keleş, H., & Gözen, E. (2023). The perception of cultural authenticity, destination attachment, and support for cultural heritage tourism development by local people: The moderator role of cultural sustainability. *Sustainability*, 15(22), Article 15794. <https://doi.org/10.3390/su152215794>
- Wu, L., Taheri, B., Okumus, F., & Wang, S. (2024). The effects of host sincerity on tourists' perceived destination image. *The Service Industries Journal*, 44(1–2), 83–104. <https://doi.org/10.1080/02642069.2021.2011861>
- Yun, Y., & Kurniawan, A. (2023). Model of cooperative performance influence supply chain management in the field of food production cooperatives in West Bandung Regency. In *Proceedings of the International Conference on Sustainability in Technological, Environmental, Law, Management, Social and Economic Matters (ICOSTELM 2022)* (pp. 92–103). Atlantis Press. https://doi.org/10.2991/978-2-38476-112-8_10
- Zulvianti, N., Aimon, H., & Abror, A. (2022). The influence of environmental and non-environmental factors on tourist satisfaction in halal tourism destinations in West Sumatra, Indonesia. *Sustainability*, 14(15), Article 9185. <https://doi.org/10.3390/su14159185>
- Zulvianti, N., Aimon, H., & Abror, A. (2023). Perceived environmental value, destination image, and tourist loyalty: The role of tourist satisfaction and religiosity. *Sustainability*, 15(10), Article 8038. <https://doi.org/10.3390/su15108038>

APPENDIX

Measures

Variables	Items	
Islamic Cultural Heritage	CH1	There is a diverse tapestry of attractions in Malaysian community, considering historical Islamic landmarks.
	CH2	I feel enriched by the provided information on our Islamic cultural heritage.
	CH3	My visit is important in contributing to the preservation of Malaysian's Islamic cultural treasures.
	CH4	I am highly supportive for the establishment of laws and regulations safeguarding Malaysian Islamic cultural legacy.
	CH5	I am most likely to attend local community meetings to contribute to the future of Islamic tourism planning and the preservation of Islamic Malaysian cultural heritage.
	CH6	I am willing to extend assistance to promotional events and activities celebrating Islamic cultural heritage in Malaysia.
	CH7	My experience regarding the warmth of Malaysian hospitality and interaction with local Muslims are positive.
Islamic Infrastructure Development	ID1	I appreciate Malaysia's infrastructure upgrades, ensuring safer and higher-quality public transportation that accommodates Muslim tourists.
	ID2	Excited about Malaysia's Islamic infrastructure developments, enhancing my tourism experience with easy access to mosques, halal dining options, and prayer facilities.
	ID3	I welcome Malaysia's initiatives in Islamic infrastructure, improving accessibility to vital public services such as Muslim-friendly accommodations and facilities.
	ID4	Malaysia's Islamic infrastructure development crucially shapes a positive national image, showcasing modern, robust and Muslim-friendly facilities that attract Muslim tourists.
	ID5	Through improved and more developed Islamic infrastructure, Malaysia aims to optimize travel times, and enhance the comfort of Muslim travelers, providing a more efficient and enjoyable experience.
Islamic Architecture	IAA1	The Islamic architecture and impression of the buildings provide inspiration, reflecting the beauty of Islamic architecture.
	IAA2	Restoring historic Islamic buildings respects the same style in Islamic architecture, in line with the heritage of Islamic architecture.
	IAA3	I like the uniqueness in interior design and furnishings, highlighting elements of Islamic architecture.
	IAA4	I like the way the site blends with the attractive landscape, scenery, historical ensemble, and town, reflecting harmony with elements of Islamic architecture.
	IAA5	I like the information about the site, and I find it interesting, especially in the context of Islamic architecture.

Variables		Items
Muslim Tourist Satisfaction	TS1	I had a pleasant experience during my visit to Malaysia as a Muslim tourist.
	TS2	I feel happy while visiting Malaysia compared to other destinations due to its Muslim tourist-friendly amenities.
	TS3	Malaysia is the best halal Muslim tourist destination compared to other tourist destinations that I have visited
	TS4	I feel that my trip in Malaysia exceeded my expectations as a Muslim tourist.
Sustainable Islamic Tourism Development	SITD1	The Malaysian community is actively backing sustainable Islamic tourism initiatives.
	SITD2	I am willing to participate in the development of sustainable Islamic tourism.
	SITD3	I am willing to participate in the promotion, education, and conservation of the natural environment in Malaysia to promote sustainable Islamic tourism.
	SITD4	I am willing to comply with the applicable regulations in Malaysia to reduce the negative impact of tourism and to promote sustainable Islamic tourism.
	SITD5	The regulations that apply are not too restrictive for tourists to obey and helps in promoting sustainable Islamic tourism.
Environmental Sustainability	ES1	Preservation of traditional rural landscapes.
	ES2	Tourism will provide waste management.
	ES3	Tourism will provide conservation and protection of natural areas (mountain, lake, sanctuaries).
	ES4	Tourism generates business activities.
Economic Sustainability	ECS1	Tourism increases household income.
	ECS2	Tourism generates employment opportunities and benefits in the area.
	ECS3	Tourism improves the living standard of the local people.
	ECS4	Tourism promotes local enterprises.
	ECS5	Tourism plays an integral role in the economy.
Socio-cultural Sustainability	SCS1	Tourism provides benefits for backward people.
	SCS2	Tourism creates social programs/schemes for backward people.
	SCS3	Tourism increases the empowerment of local communities.
	SCS4	Due to new employment opportunities in tourism areas, will minimise the societal problem.
	SCS5	Tourism will support enterprises' benefits for backward people.
	SCS6	Tourism will increase the management and conservation of heritage sites.
	SCS7	Promotes better understanding between cultures and enhance the level of cultural awareness of locals