Sustainability and Loyalty in Halal Tourism: An Indonesian Perspective

Andhi Sukma[1]*, Robin Chen[2], Radhi Abdul Halim Rachmat[3], Denny Saputera[4]

[1,3,4]Universitas Widyatama, Bandung, Indonesia
[2]National Taipei University, Taiwan, Province of China
E-mail: [1]andhi.sukma@widyatama.ac.id, [2]robinchen@gm.ntpu.edu.tw,
[3]radhi.abdul@widyatama.ac.id, [4]denny.saputera@widyatama.ac.id
*)Corresponding Author

Abstract

Research Originality: This study introduces new behavioral dimensions, including environmental awareness, ethical service innovation, and tourists' decision control, in the formation of loyalty and advocacy behavior.

Research Objectives: This study examines the contribution of sustainability-oriented factors to Muslim tourist loyalty and recommendation behavior, with satisfaction and intention to revisit serving as mediating variables.

Research Methods: A quantitative approach was employed using a structured questionnaire distributed to 460 Muslim tourists. The data were analyzed using structural equation modeling to evaluate the causal relationships among the variables.

Empirical Results: Environmental awareness and tourists' ability to make ethical decisions have a significant influence on loyalty and word-of-mouth behavior. Ethical service innovation enhances customer satisfaction, which in turn contributes to loyalty. Satisfaction and revisit intention were found to be essential mediators in this relationship.

Implications: This study provides theoretical insights by integrating sustainability into halal tourism behavior models and offers practical recommendations for destination managers to develop emotionally engaging and environmentally responsible tourism services.

Keywords:

sustainable service innovation; sustainability awareness; perceived behavioral control; tourist loyalty; word of mouth

INTRODUCTION

Tourism is experiencing a paradigmatic shift from mass-market consumption to more sustainable, value-driven experiences. Within this transformation, halal tourism has emerged as a dynamic and rapidly growing segment, integrating Islamic ethical principles with environmental and socio-cultural responsibility (Hamaguchi, 2019; Sorokina et al., 2022). Unlike conventional tourism that focuses solely on service or leisure, halal tourism prioritizes Sharia-compliant elements—such as halal food, prayer facilities, and gender-sensitive services—while also responding to increasing demands for sustainability, community inclusion, and local authenticity (Alimusa et al., 2023; Fauzi & Battour, 2025). In Indonesia, the world's largest Muslim-majority country, halal tourism is growing rapidly, contributing over 40 trillion rupiahs in foreign exchange earnings in 2018 and recording an 18% increase in tourist arrivals (Jung et al., 2024; Layali & Suriani, 2022).

At the policy level, the Sustainable Development Goals (SDGs), especially Goal 11, call for a more inclusive, resilient, and sustainable approach to tourism. For halal destinations, this implies a shift from mere compliance with religious norms to broader innovation in sustainable services, technological adoption, and community-based tourism models (Mathivathanan et al., 2022; Sharma et al., 2021). Mahran et al. (2025), Ferraris et al. (2020), and Kumar et al. (2021) emphasized that tourism innovation must reflect both local identity and environmental stewardship to remain competitive and socially relevant.

Scholarly discourse on loyalty in halal tourism remains divided. One perspective prioritizes religious adherence and Sharia certification as the main predictors of tourist satisfaction and loyalty (King et al., 2019; Layali & Suriani, 2022). Another strand highlights psychological and behavioral factors, such as sustainability awareness and tourists' ability to make ethical travel decisions, as stronger predictors of loyalty and advocacy (Al-Ansi et al., 2019; Guyader et al., 2019; Subchi et al., 2024). These conflicting views highlight an important theoretical gap: the absence of an integrative model that captures both value-based and compliance-based drivers of loyalty in halal tourism.

Recent empirical studies lend support to this evolving view. Sarassina et al. (2023) found that tourists with high sustainability awareness exhibit stronger intentions to revisit and recommend destinations aligned with their environmental values. Seegebarth et al. (2023) demonstrate that perceived behavioral control has a significant influence on sustainable consumption when individuals feel empowered and supported (Domi et al., 2019; Font et al., 2021). However, such behavioral insights are still underutilized in halal tourism research, which often underrepresents constructs such as sustainability awareness, innovation, and behavioral control.

Moreover, mediating variables such as tourist satisfaction and revisit intention are acknowledged in tourism literature but rarely analyzed within a sustainability framework in halal tourism contexts (Qiu et al., 2023). Petrova et al. (2021) recognized the role of community-based tourism in enhancing satisfaction but failed to explain how such satisfaction leads to loyalty through behavioral mediators.

In light of these observations, this study identifies three clear research gaps. First, there is limited empirical integration of sustainability-oriented constructs—such as sustainability awareness, service innovation, and behavioral control—into behavioral loyalty models for halal tourism. Second, the mediating roles of psychological constructs such as perceived value, tourist trust, satisfaction, and revisit intention remain theoretically underexplored. Third, most halal tourism studies overlook the Indonesian context, where the industry is expanding rapidly but lacks integrative empirical models (Fang-ming et al., 2023).

To address these gaps, this research makes three key contributions. First, it introduces sustainability awareness, ethical innovation, and perceived behavioral control into a unified framework for halal tourism loyalty. Second, it examines how value perception and satisfaction mediate behavioral outcomes, such as revisiting intention, loyalty, and word-of-mouth. Third, it grounds the model in the Indonesian halal tourism sector, contributing regional insights to a globally relevant discourse.

Accordingly, the objectives of this study are: (1) to analyze the effect of sustainable service innovation, halal service quality, destination image, and sustainability awareness on revisit intention, loyalty, and word-of-mouth; (2) to evaluate the mediating roles of perceived value, tourist trust, satisfaction, and perceived behavioral control; and (3) to offer strategic recommendations for tourism stakeholders seeking to align Islamic ethics with sustainability-driven innovation.

METHODS

This study employs a quantitative, explanatory research design using a cross-sectional approach to assess the causal relationships among sustainable service innovation, sustainability awareness, perceived behavioral control, and tourist loyalty within the Indonesian halal tourism sector. The theoretical framework is grounded in the Theory of Planned Behavior (TPB) and extended to incorporate sustainability-oriented constructs (Hasan et al., 2020; Rao et al., 2022). This design is well-suited for testing theoretical models, quantifying perceptions, and identifying behavioral predictors through standardized measurement. Data were collected via a structured online questionnaire disseminated through social media platforms, tourism communities, and academic mailing lists. The online format enabled broad geographic reach and efficient data collection, particularly in the context of post-pandemic travel recovery. A pre-test was conducted to ensure clarity, linguistic appropriateness, and content validity (Berhanu & Raj, 2020; Prasetyo et al., 2021).

The population of interest comprises Indonesian Muslim tourists who engaged in halal tourism activities within the past 12 months. A purposive sampling technique was employed to select respondents who had experience in visiting halal tourism destinations in Indonesia. The inclusion criteria were as follows: (1) Muslim identity, (2) age 18 years or above, and (3) having visited at least one halal-certified tourism destination in the past 12 months. This ensured that the respondents were relevant and had adequate knowledge to assess the

constructs under study. This sample size meets the minimum threshold recommended for Partial Least Squares Structural Equation Modeling (PLS-SEM), which requires a sample size of at least 10 times the number of the most complex structural paths in the model (Hair et al., 2019). The demographic profile of the sample—diverse in terms of gender, age, occupation, income, and travel frequency—enhances the generalizability of the findings within the context of the Indonesian halal tourism market.

Data were collected using a structured questionnaire administered through both online and offline platforms. Online distribution was facilitated via Google Forms and disseminated through social media channels, targeting individuals who had participated in halal tourism. Offline data collection was conducted at selected halal tourism destinations across Indonesia, where respondents were approached in person and provided with printed copies of the questionnaire. A pilot test involving 30 respondents was conducted prior to full-scale data collection to ensure the clarity and reliability of the questionnaire items. Based on the feedback received, minor revisions were made to enhance clarity and reduce potential ambiguity. To ensure the authenticity of responses, the questionnaire was preceded by an informed consent form detailing the research objectives, confidentiality assurances, and the voluntary nature of participation. Respondents were assured that their identities would remain anonymous and that their responses would be used exclusively for academic purposes.

The measurement of variables in this study is based on validated constructs from previous literature, using a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Sustainable Service Innovation was measured using six indicators adapted from Petrova et al. (2021) and Layali & Suriani (2022), covering eco-friendly practices, community engagement, and technological advancements. Halal Service Quality consisted of six items adapted from Alimusa et al. (2023) and Subchi et al. (2024), focusing on reliability, assurance, and halal compliance. Destination Image was measured using five indicators from Kuhzady et al. (2020) and Zouni et al. (2020), which capture cognitive, affective, and conative perceptions of the destination. Sustainability Awareness comprised four items adapted from Sarassina et al. (2023) and Noor et al. (2021), reflecting knowledge and behavioral intentions related to sustainable tourism practices.

Perceived value was assessed using four items derived from Hu et al. (2021) and Baker et al. (2020), encompassing functional, emotional, and economic value dimensions. The Tourist Trust included four items from Ferraris et al. (2020) and Petrova et al. (2021), which measured trust in service providers and the credibility of destination-related information. Tourist Satisfaction was measured using three indicators from Tešin et al. (2023) and Rasoolimanesh et al. (2022), focusing on overall satisfaction and satisfaction with specific service aspects. Perceived Behavioral Control consisted of four items adapted from Tsang et al. (2022) and Seegebarth et al. (2023), related to self-efficacy and resource availability.

Tourist Loyalty was measured with three items from Layali & Suriani (2022) and Alimusa et al. (2023), assessing both behavioral and attitudinal loyalty. Revisit intention

was measured using four items adapted from Subchi et al. (2024) and Mohamed et al. (2022), addressing overall revisit intention, satisfaction influence, cultural and emotional connections, and word-of-mouth influence. Finally, Word of Mouth (WOM) was assessed using three items adapted from Sarassina et al. (2023) and Noor et al. (2021), which focused on tourists' intentions to share either positive or negative experiences.

Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS 3.0. PLS-SEM was selected for its suitability in exploratory research, its ability to handle non-normal data, and its strong predictive capabilities. The analytical process consisted of two stages (Hair et al., 2021). First, the measurement model was evaluated to assess construct reliability using Cronbach's alpha and composite reliability, convergent validity through average variance extracted (AVE), and discriminant validity using both the Fornell–Larcker criterion and the Heterotrait–Monotrait (HTMT) ratio. Second, the structural model was tested by examining path coefficients, t-values, and p-values through bootstrapping with 5,000 samples. Model fit was further assessed using R^2, f^2, Q^2, and the Standardized Root Mean Square Residual (SRMR) index (Hair et al., 2024).

This study proposes a framework that connects sustainability-driven services and destination quality to the behavioral outcomes of Muslim tourists. Sustainable service innovation, halal service quality, destination image, and sustainability awareness serve as independent variables. These influence perceived value, tourist trust, satisfaction, and perceived behavioral control as mediators. The framework then leads to revisiting the concepts of intention, tourist loyalty, and word-of-mouth behavior. The model reflects both direct and indirect relationships, capturing how value perceptions and emotional responses shape long-term engagement. It highlights that loyalty and advocacy in halal tourism are formed through a combination of service excellence, ethical awareness, and psychological empowerment.

Figure 1. Conceptual Framework
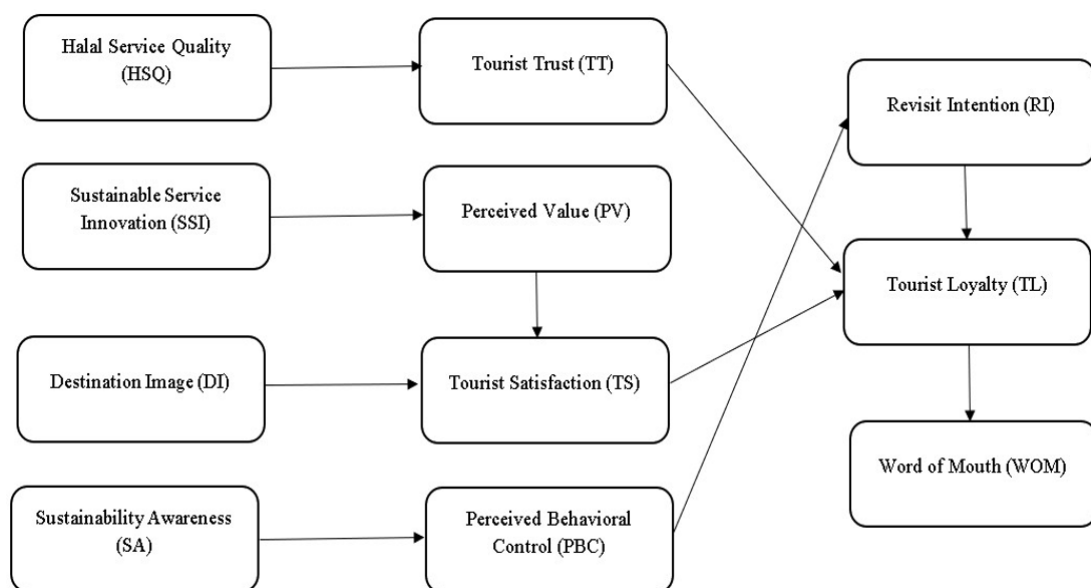
RESULTS AND DISCUSSION

Table 1 presents the demographic and behavioral characteristics of the respondents who participated in this study. A total of 460 valid responses were obtained from Muslim tourists with prior experience in halal tourism in Indonesia. The majority of respondents were male (52.17%), aged between 21 and 30 years (39.13%), and single (50%). Most held a bachelor's degree (54.35%) and were employed as professionals (39.13%). In terms of income, the most significant proportion of respondents earned between IDR 5–10 million per month (43.48%). Nearly all respondents were Indonesian nationals (93.48%) and identified as Muslim (95.65%).

Table 1. Attributes of Review Respondents

Respondent Attributes	Categories	Frequency (N)	Percentage (%)
Gender	Male	240	52,17
	Female	220	47,83
Age	< 20	30	6,52
	21 - 30	180	39,13
	31 - 40	140	30,43
	41 - 50	70	15,22
	> 50	40	8,7
Marital Status	Single	230	50
	Married	220	47,83
	Others	10	2,17
Educational Level	High School	100	21,74
	Bachelor's Degree	250	54,35
	Master's Degree	80	17,39
	Doctoral Degree	30	6,52
Occupation	Student	150	32,61
	Professional	180	39,13
	Entrepreneur	80	17,39
	Retired	20	4,35
	Others	30	6,52
Income Level	< IDR 5 million	160	34,78
	IDR 5-10 million	200	43,48
	> IDR 10 million	100	21,74
Nationality	Indonesian	430	93,48
	Others	30	6,52
Religion	Islam	440	95,65
	Others	20	4,35

Respondent Attributes	Categories	Frequency (N)	Percentage (%)
Frequency of Travel	Rarely (1-2 times/year)	140	30,43
	Occasionally (3-5 times/year)	200	43,48
	Frequently (>5 times/year)	120	26,09
Experience with Halal Tourism	Yes	350	76,09
	No	110	23,91
Awareness of Sustainable Tourism	Low	80	17,39
	Moderate	240	52,17
	High	140	30,44
Trust in Halal Certification	Low	50	10,87
	Moderate	260	56,52
	High	150	32,61
Satisfaction Level	Very Dissatisfied	10	2,17
	Dissatisfied	30	6,52
	Neutral	90	19,57
	Satisfied	200	43,48
	Very Satisfied	130	28,26
Loyalty Intention	Yes	380	82,61
	No	80	17,39

Source: Author's Calculation Results.

Regarding travel frequency, 43.48% reported traveling occasionally (3–5 times per year). A significant majority (76.09%) had prior experience with halal tourism, while 52.17% reported a moderate level of awareness regarding sustainable tourism practices.

When asked about trust in halal certification, most respondents reported a moderate level of trust (56.52%). Satisfaction levels were generally high, with 43.48% indicating satisfaction and 28.26% stating they were very satisfied with their halal tourism experiences. Furthermore, 82.61% of respondents expressed loyalty intentions, indicating a strong likelihood of revisiting or recommending halal tourism destinations.

Table 2 presents the results of the measurement model (outer model) analysis using the Partial Least Squares Structural Equation Modeling (PLS-SEM) framework. The evaluation follows established criteria, including outer loadings, Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE). Outer loadings measure the strength of association between indicators and their respective constructs, with values above 0.70 indicating satisfactory indicator reliability. The results show that most indicators meet this criterion. For example, CRM1 (0.925), CRM3 (0.938), and CRM4 (0.923) exhibit strong loadings, demonstrating their substantial contribution to the Halal Service Quality (HSQ) construct. Although some indicators—such as CI1 (0.738) and CI2

(0.757) for the Destination Image (DI) construct—have comparatively lower loadings, they still exceed the minimum acceptable threshold.

Table 2. Analyses of the External Model

Construct / Item	Loadings	Alpha	CR	AVE
Halal Service Quality (HSQ)		0.958	0.966	0.827
Consistent provision of halal-certified products.	0,925			
Provision of halal procedure guidelines at service points.	0,811			
Staff competence in halal service provision.	0,938			
Transparency in communicating product halal status.	0,923			
Availability of proper worship facilities in tourist areas	0,926			
Timeliness in service delivery and food presentation	0,926			
Destination Image (DI)		0.790	0.855	0.541
Knowledge of the destination's main attractions.	0,738			
Availability of facilities that support Muslim travelers	0,757			
Feeling safe and comfortable while in the destination	0,744			
Emotional attachment to local culture.	0,703			
Intention to recommend the destination to others.	0,735			
Sustainability Awareness (SA)		0.956	0.968	0.884
Awareness of destination waste management efforts.	0,941			
Awareness of destination conservation initiatives.	0,939			
Intention to choose destinations with green practices	0,947			
Willingness to participate in conservation activities	0,933			
Sustainable Service Innovation (SSI)		0.949	0.959	0.796
Use of renewable energy in tourism operations.	0,919			
Provision of eco-friendly water management facilities.	0,906			
Community training for tourism services.	0,906			
Tourism-community partnership for sustainability.	0,851			
Use of digital apps for streamlined reservations.	0,860			
Safe and efficient cashless payment system	0,910			
Tourist Trust (TT)		0,867	0,909	0,716
Trust in the information provided by the destination	0,848			
Clarity and openness in the delivery of information	0,908			
Confidence in the credibility of the service provider	0,833			
Perceived provider integrity in quality maintenance.	0,791			
Tourist Satisfaction (TS)		0,717	0,841	0,638
Perceived provider integrity in quality maintenance.	0,776			
Satisfaction with the quality of service received	0,797			
Satisfaction with service quality.	0,822			

Construct / Item	Loadings	Alpha	CR	AVE
Perceived Behavioral Control (PBC)		0,783	0,857	0,600
Confidence in planning and executing the trip	0,817			
Ability to face challenges during the journey	0,788			
Availability of information about the destination	0,716			
Adequate facility support during the journey	0,776			
Perceived Value (PV)		0,897	0,928	0,764
Service quality that meets travelers' expectations	0,866			
Ease of accessing the facilities provided	0,876			
Travelers' perception of the price of services offered	0,875			
Availability of tour packages that offer value for money	0,878			
Revisit Intention (RI)		0,861	0,907	0,712
I intend to return to this destination in the future	0,913			
Planned or considered a return visit.	0,900			
Strong emotional connection to the destination.	0,828			
Likely to revisit with promotional offers.	0,720			
Word of Mouth (WOM)		0,819	0,894	0,740
Tendency to share positive experiences on social media	0,742			
Willingness to recommend the destination.	0,913			
Reluctance to spread negative information	0,913			
Tourist Loyalty (TL)		0.765	0.865	0.681
Intention to return to the same destination	0,860			
Frequency of return visits that have been made	0,833			
Propensity to recommend the destination to others	0,781			

Source: Author's Calculation Results.

Internal consistency reliability, as assessed by Cronbach's alpha, shows that all constructs surpass the recommended value of 0.70. Constructs such as HSQ (0.958), Sustainability Awareness (SA) (0.956), and Revisit Intention (RI) (0.861) demonstrate strong internal consistency, indicating that the items within each construct reliably measure the same underlying concept. These findings are further supported by composite reliability values, all of which exceed the 0.70 benchmark. For instance, HSQ and SA yield CR values of 0.966 and 0.968, respectively, confirming their reliability. Convergent validity is also confirmed through AVE results, with most constructs exceeding the acceptable threshold of 0.50. Constructs such as HSQ (0.827), SA (0.884), and RI (0.712) demonstrate that their indicators explain a substantial proportion of variance. The DI construct, while exhibiting a lower AVE of 0.541, remains within acceptable limits.

Overall, the measurement model demonstrates satisfactory reliability and validity. However, to further improve measurement quality—particularly for the DI construct—it

may be advisable to review or eliminate indicators with comparatively lower loadings. Furthermore, additional analysis, such as discriminant validity testing, is recommended to ensure that each construct is conceptually distinct from the others.

Table 3 presents the results of the discriminant validity analysis using the Fornell–Larcker criterion, which evaluates whether each construct in the model is empirically distinct from the others. Discriminant validity is established when the square root of the Average Variance Extracted (AVE) for each construct—represented by the diagonal values—is greater than its correlations with any other construct in the model. The analysis confirms that all constructs satisfy this criterion. For instance, the diagonal value for Destination Image (DI) is 0.735, which exceeds its correlations with other constructs, indicating adequate discriminant validity. Similarly, constructs such as Halal Service Quality (HSQ), with a square root of AVE of 0.909, Sustainability Awareness (SA), with 0.940, and Sustainable Service Innovation (SSI), with 0.892, also demonstrate satisfactory discriminant validity.

However, a few constructs exhibit relatively high inter-construct correlations that merit further scrutiny. For example, the correlation between Revisit Intention (RI) and Word of Mouth (WOM) is 0.912, which, while still below the square root of their respective AVEs, indicates a strong relationship that may suggest potential conceptual overlap. Similarly, the correlation between Sustainability Awareness (SA) and Perceived Value (PV) is 0.883; however, their discriminant validity remains acceptable as their AVE square roots are higher. Another notable correlation is observed between Tourist Satisfaction (TS) and Perceived Value (PV), with a correlation coefficient of 0.784.

Table 3. Result of Discriminant Validity

Variable	DI	HSQ	PBC	PV	RI	SA	SSI	TL	TS	TT	WOM
DI	0,735										
HSQ	0,777	0,909									
PBC	0,819	0,566	0,775								
PV	0,778	0,445	0,796	0,874							
RI	0,724	0,450	0,683	0,609	0,844						
SA	0,756	0,418	0,777	0,883	0,551	0,940					
SSI	0,566	0,571	0,472	0,473	0,493	0,443	0,892				
TL	0,646	0,489	0,676	0,454	0,744	0,398	0,511	0,825			
TS	0,726	0,558	0,738	0,784	0,586	0,717	0,567	0,539	0,799		
TT	0,670	0,512	0,695	0,721	0,666	0,594	0,514	0,523	0,805	0,846	
WOM	0,697	0,398	0,669	0,583	0,912	0,551	0,441	0,735	0,578	0,671	0,860

Source: Author's Calculation Results.

Table 4 presents the evaluation of the structural model based on effect size (f^2), coefficient of determination (R^2), and predictive relevance (Q^2), within the PLS-SEM framework. The effect size (f^2) measures the impact of an exogenous construct on an endogenous construct, with values of 0.02, 0.15, and 0.35 representing small, medium, and large effects, respectively. The results indicate that Sustainability Awareness (SA) has the highest effect size (f^2 = 1.525), signifying a substantial impact on its associated dependent variables. Similarly, Tourist Loyalty (TL) (f^2 = 1.178), Halal Service Quality (HSQ) (f^2 = 0.356), and Sustainable Service Innovation (SSI) (f^2 = 0.288) demonstrate strong effects, underscoring their critical roles within the model. In contrast, constructs such as Tourist Trust (TT) (f^2 = 0.011) and Tourist Satisfaction (TS) (f^2 = 0.046) exhibit relatively small effect sizes, indicating limited influence on their respective dependent variables.

The coefficient of determination (R^2) reflects the proportion of variance in the endogenous constructs explained by their predictors, with higher values indicating greater explanatory power. The findings reveal that Perceived Behavioral Control (PBC) has the highest R^2 value (0.876), suggesting that 87.6% of its variance is accounted for by the model. Other constructs, including Revisit Intention (RI) (R^2 = 0.617) and Tourist Loyalty (TL) (R^2 = 0.575), also demonstrate substantial explanatory power. In addition, the predictive relevance (Q^2) values, which assess the model's capability to predict observed values using a blindfolding procedure, are positive for all constructs—confirming the model's predictive strength. Notably, PBC (Q^2 = 0.604), TS (Q^2 = 0.406), and TL (Q^2 = 0.385) exhibit strong predictive relevance. Constructs such as Word of Mouth (WOM) (Q^2 = 0.395) and RI (Q^2 = 0.319) also show considerable predictive power.

Table 4. Effect Size (f^2), Determination (R^2), and Predictive Relevance (Q^2)

| Variable	f^2							R^2	Q^2
	PBC	PV	RI	TL	TS	TT	WOW		
DI					0,097				
HSQ						0,356			
PBC			0,876					0,604	0,326
PV					0,349			0,224	0,169
RI				0,617				0,467	0,319
SA	1,525								
SSI		0,288							
TL							1,178	0,575	0,385
TS				0,046				0,649	0,406
TT				0,011				0,263	0,186
WOM								0,541	0,395

Source: Author's Calculation Results

Overall, the structural model demonstrates strong explanatory and predictive capabilities. However, further investigation of constructs with smaller effect sizes is recommended to enhance the model's robustness and improve its predictive accuracy.

The structural model depicted in the figure illustrates the relationships among various latent constructs using Partial Least Squares Structural Equation Modeling (PLS-SEM). Each construct, represented by a blue circle, is measured by multiple indicators (in yellow), with corresponding outer loadings displayed adjacent to the indicators. All outer loadings exceed the recommended threshold of 0.70, indicating strong indicator reliability. The model includes path coefficients between constructs, reflecting the strength and significance of the hypothesized relationships.

For example, Sustainability Awareness (SA) exerts a significant influence on Perceived Behavioral Control (PBC), with a strong path coefficient of 38.833. In turn, PBC significantly affects Tourist Satisfaction (TS), with a path coefficient of 23.365. Additionally, Perceived Value (PV) strongly predicts Revisit Intention (RI) (path coefficient = 49.314), and RI has a substantial impact on Tourist Loyalty (TL), with a coefficient of 15.758. The model also underscores the mediating roles of constructs such as TS and Tourist Trust (TT) in shaping TL. Furthermore, significant associations between Word of Mouth (WOM) and TL suggest that positive experiences contribute to increased loyalty.

Overall, the structural model reveals statistically significant and theoretically meaningful relationships among constructs, confirming the proposed hypotheses and highlighting key drivers of tourist loyalty in the halal tourism context.

Figure 2. Bootstrapping analysis
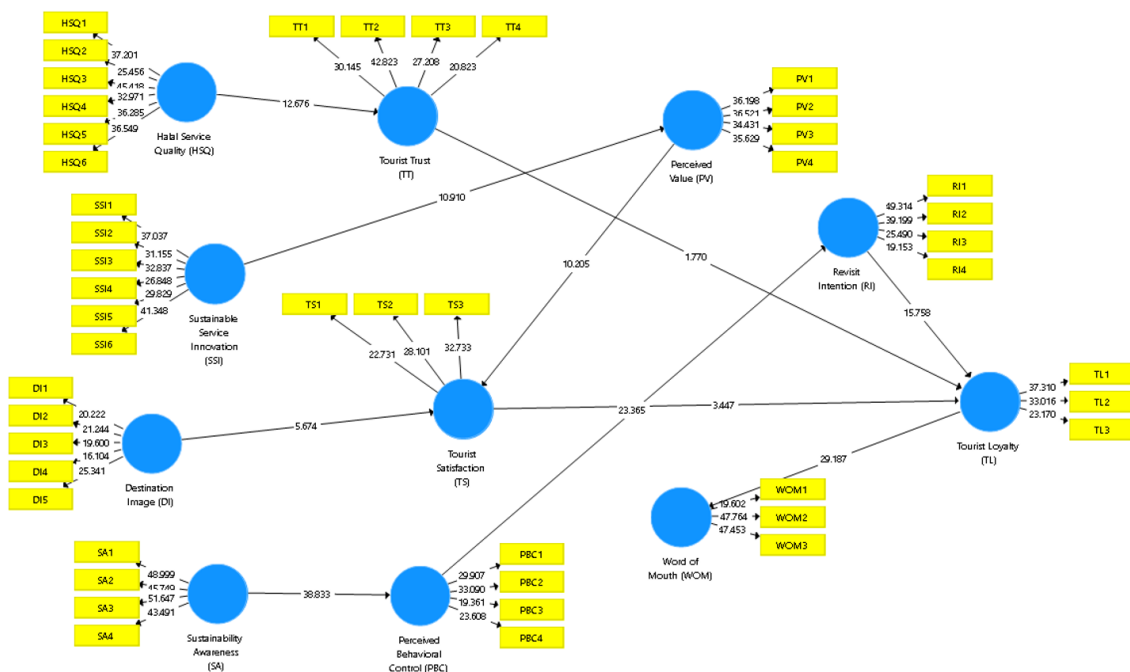
As detailed in Table 5, Sustainability Awareness (SA) exhibited the strongest direct effect on Revisit Intention (β = 0.403, t = 6.38, p < 0.001) and a significant effect on Tourist Loyalty (β = 0.278, t = 4.67, p < 0.01). These findings are theoretically consistent with the extended Theory of Planned Behavior (TPB), which posits that value-driven attitudes influence behavioral intentions. This result also aligns with Sarassina et al. (2023), who found that Muslim tourists' environmental and ethical values are significant determinants of destination loyalty. The stronger influence of SA on intention compared to loyalty suggests that its effect is primarily channeled through motivational pathways.

Table 5. Bootstrapping Effect Results

Construct	Original Sample (O)	T Statistics (|O/STDEV|)	P Values
HSQ -> TL	-0,066	1,789	0,074
HSQ -> WOM	-0,048	1,796	0,073
DI -> TL	0,069	2,610	0,009*
DI -> WOM	0,051	2,610	0,009*
SA -> RI	0,531	18,680	0,000*
SA -> TL	0,367	11,651	0,000*
SA -> WOM	0,270	9,879	0,000*
SSI -> TL	0,062	3,196	0,001*
SSI -> TS	0,263	7,037	0,000*
SSI -> WOM	0,046	3,170	0,002*
TT -> WOM	-0,094	1,783	0,075
TS -> WOM	0,174	3,446	0,001*
PBC -> TL	0,472	12,065	0,000*
PBC -> WOM	0,347	10,067	0,000*
PV -> TL	0,132	3,454	0,001*
PV -> WOM	0,097	3,439	0,001*
RI -> WOM	0,508	12,549	0,000*

* means significant at 5%

Perceived Behavioral Control (PBC) was significantly related to both Tourist Loyalty and Word of Mouth (WOM). From a theoretical standpoint, this finding supports the TPB's assertion that perceived control facilitates volitional behavior, particularly in contexts where tourists must make active choices among alternatives. Empirically, the result is consistent with Seegebarth et al. (2023), who demonstrated that perceptions of control are predictive of sustainable consumer behavior. In the context of halal tourism, the capacity to select ethically aligned services appears to drive both behavioral loyalty and advocacy intentions.

Sustainable Service Innovation (SSI) was found to have a positive effect on Tourist Satisfaction, but not directly on Tourist Loyalty. This finding highlights the importance of distinguishing between affective and behavioral outcomes. While innovation enhances satisfaction—an emotional evaluation—it does not automatically translate into loyalty unless satisfaction acts as a mediating factor, as noted by Sharma et al. (2021). The result supports conceptual models that position satisfaction as a key mediator in service innovation frameworks, particularly within experiential sectors such as tourism.

As shown in Table 6, the analysis of indirect effects revealed that Revisit Intention significantly mediated the relationships between Sustainability Awareness (SA) and Tourist Loyalty (indirect β = 0.154, p < 0.05), as well as between Perceived Behavioral Control (PBC) and loyalty (indirect β = 0.102, p < 0.05). Similarly, Tourist Satisfaction mediated the relationship between Sustainable Service Innovation (SSI) and Word of Mouth (WOM) (indirect β = 0.142, p < 0.05). These findings are consistent with Layali and Suriani (2022), who emphasize that the pathway from cognitive antecedents to behavioral outcomes is frequently mediated by intention and satisfaction. Such mediational processes are also supported by extensions of the Theory of Planned Behavior (TPB), which proposes that affective and volitional mechanisms jointly influence behavioral responses.

Table 6. Specific indirect effects

Construct	Original Sample (O)	T Statistics (|O/STDEV|)	P Values
HSQ -> TT -> TL	-0,066	1,789	0,074
HSQ -> TT -> TL -> WOM	-0,048	1,796	0,073
DI -> TS -> TL	0,069	2,610	0,009*
DI -> TS -> TL -> WOM	0,051	2,610	0,009*
SA -> PBC -> RI	0,531	18,680	0,000*
SA -> PBC -> RI -> TL	0,367	11,651	0,000*
SA -> PBC -> RI -> TL -> WOM	0,270	9,879	0,000*
SSI -> PV -> TS -> TL	0,062	3,196	0,001*
SSI -> PV -> TS	0,263	7,037	0,000*
SSI -> PV -> TS -> TL -> WOM	0,046	3,170	0,002*
TT -> TL -> WOM	-0,094	1,783	0,075
TS -> TL -> WOM	0,174	3,446	0,001*
PBC -> RI -> TL	0,472	12,065	0,000*
PBC -> RI -> TL -> WOM	0,347	10,067	0,000*
RI -> TL -> WOM	0,508	12,549	0,000*
PV -> TS -> TL	0,132	3,454	0,001*
PV -> TS -> TL -> WOM	0,097	3,439	0,001*

* means significant at 5%

Overall, the results affirm the relevance of the extended TPB framework within the context of halal tourism and underscore the multidimensional influence of SSI, SA, and PBC on tourist loyalty and word of mouth. The model not only confirms key direct relationships but also highlights the essential mediating roles of revisiting intention and satisfaction in shaping these outcomes. These insights contribute to theoretical advancement in halal tourism behavior and offer practical guidance for destination managers aiming to foster loyalty through innovation and sustainability-driven strategies.

The findings of this study offer several significant insights that extend the existing understanding of tourist behavior in halal tourism. First, sustainability awareness was found to be a strong predictor of both revisit intention and tourist loyalty. This result suggests that Muslim tourists are increasingly aligning their travel preferences with destinations that reflect environmental ethics and sustainability values. This finding is consistent with Seegebarth et al. (2023), who highlight the growing relevance of sustainability in shaping consumer behavior within value-driven tourism contexts. Second, tourists' sense of behavioral control—their perceived ability to make autonomous, ethical travel decisions—also emerged as a strong influence on both loyalty and word-of-mouth intentions. This study supports the proposition that perceived control empowers tourists to act consistently with their ethical standards, thus reinforcing brand trust and long-term engagement. Similar conclusions were drawn by Font et al. (2021) in their examination of volitional factors in sustainable destination choices. Third, ethical service innovation, although it does not directly impact loyalty, plays a crucial role in enhancing tourist satisfaction. This result aligns with Rasoolimanesh et al. (2022), who argue that innovation in service delivery must evoke emotional and experiential satisfaction to be behaviorally impactful. In this study, satisfaction functioned as a key mediating mechanism between innovation and loyalty.

Furthermore, both tourist satisfaction and revisit intention demonstrated significant mediating effects, reinforcing the notion that loyalty in halal tourism emerges through both affective (emotional satisfaction) and cognitive (behavioral evaluation) pathways. These findings support an expanded view of behavioral models in tourism by demonstrating how value alignment—through sustainability and ethical awareness—drives both immediate outcomes (satisfaction and revisit) and long-term commitments (loyalty and advocacy). In contrast to earlier studies that focused primarily on Shariah compliance as the sole driver of loyalty, this research positions sustainability as a complementary force that enhances behavioral outcomes in ethically sensitive markets.

This study contributes to the literature by integrating sustainability-oriented constructs into the framework of halal tourism loyalty, bridging gaps in TPB-based models, and responding to recent calls for more holistic behavioral models. Practically, it offers insights for tourism providers to design strategies that combine Shariah compliance with environmental responsibility and consumer empowerment. To build long-term loyalty, tourism operators must embed sustainability not only in infrastructure but also in narratives, service experiences, and digital engagement. Transparent communication

about green practices, accessible halal-certified options, and empowering digital tools (e.g., mobile halal travel guides) can enhance both satisfaction and post-visit advocacy among Muslim tourists.

CONCLUSION

This study concludes that sustainability awareness and perceived behavioral control are key predictors of loyalty and word-of-mouth behavior in halal tourism. Ethical service innovation, while not directly influencing loyalty, enhances tourist satisfaction, which in turn leads to stronger loyalty outcomes. The mediating roles of satisfaction and revisit intention confirm that both emotional and cognitive pathways are essential in forming long-term behavioral engagement among Muslim tourists.

The findings contribute theoretically by extending behavioral frameworks in halal tourism to include sustainability and ethical decision-making. Practically, they suggest that halal tourism stakeholders—such as destination managers, policy-makers, and service providers—should integrate environmental responsibility and value-based service innovation into their strategic offerings. Transparent sustainability communication, culturally aligned service experiences, and digital tools that empower travelers can enhance tourist satisfaction and advocacy, ultimately strengthening Indonesia's position in the global halal tourism market.

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