




Article

Validating the Community Forest Intention Model: Exploring Tourist Experience, Satisfaction, and Sustainable Intentions in Community-Based Ecotourism

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Abstract

Community-based ecotourism in community forests, such as Suan Pa Ket Nom Klao, Thailand, offers a promising avenue for promoting sustainable development through meaningful tourist experiences. This study develops and validates the Community Forest Intention Model (CFIM) to examine the relationships among Tourist Experience (TE), Tourist Satisfaction (SAT), and Sustainable Intention (SI) using Partial Least Squares Structural Equation Modeling (PLS-SEM). Data were collected from 128 participants who engaged in six structured activities at Suan Pa Ket Nom Klao, with responses measured via a 5-point Likert scale questionnaire. The results indicate that TE, comprising Service Quality, Accessibility, and Learning Engagement, significantly influences SAT ($R^2 = 0.562$), with Learning Engagement exerting the strongest effect ($\beta = 0.413$; $p < 0.001$). SAT, in turn, positively predicts SI ($\beta = 0.502$; $p < 0.001$; $R^2 = 0.252$). All hypothesized paths were statistically significant, confirming the model's validity. These findings highlight the critical role of educational and service-related experiences in fostering tourist satisfaction and sustainable behaviors. This study provides actionable insights for enhancing ecotourism programs to support conservation and community engagement.

Keywords: community forest; tourist experience; behavioral intention; satisfaction; PLS-SEM; sustainable tourism; ecotourism



Academic Editors: Keun-Soo Park, Nan Chen, Kyoung-Bae Kim and Sung-Bum Kim

Received: 9 July 2025

Revised: 14 August 2025

Accepted: 15 August 2025

Published: 25 August 2025

Citation: Teeravarunyou, S.; Kamolwit, K.; Kitirojpan, P.; Pattanachan, P.; Tirachulee, B.; Buddhawong, S. Validating the Community Forest Intention Model: Exploring Tourist Experience, Satisfaction, and Sustainable Intentions in Community-Based Ecotourism. *Sustainability* **2025**, *17*, 7644. <https://doi.org/10.3390/su17177644>

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1. Introduction

The role of community forests in promoting sustainable development is increasingly recognized on a global scale [1–4]. Managed by local communities, these forests provide a wide range of environmental, social, and economic benefits. They serve as important reservoirs of biodiversity and natural resource conservation, while also offering income opportunities and supporting local cultural heritage [5]. Responsible ecotourism has emerged as a powerful tool in advancing community forestry. Honey [6] emphasized that ecotourism enables visitors to engage with the ecological and cultural richness of community forests, while directly supporting conservation and local livelihoods.

In recent years, the role of tourist experience has gained prominence in both ecotourism and community-based tourism, as destinations strive not only to attract visitors

but also to foster long-term engagement and sustainable behaviors. Modern tourists seek more than just leisure; they increasingly look for meaningful, authentic, and participatory experiences that connect them with nature, culture, and local communities. This shift has prompted tourism managers and researchers to investigate the various dimensions that constitute a high-quality tourist experience, particularly within the context of environmentally sensitive areas.

Suan Pa Ket Nom Klao, a community forest located on land owned by the Royal Forest Department but co-managed by the local residents, serves as an emerging model for community-based ecotourism. The site spans approximately 10.2 acres and is easily accessible from Bangkok. Its mission is to promote forest restoration, environmental education, and sustainability awareness through a variety of activities that involve learning, recreation, and cultural exchange. Despite its promising potential, the specific factors that contribute to visitor satisfaction and sustainable intention to revisit or support sustainability efforts remain underexplored.

Preliminary observations suggest that tourists at Suan Pa Ket Nom Klao engage with multiple touchpoints during their visit, including service quality, souvenir offerings, site accessibility, and learning activities. These elements collectively shape a multidimensional experience, yet it is unclear which aspects most significantly influence tourists' overall satisfaction and future behavioral intentions, such as revisiting the site, adopting sustainable practices, or recommending the destination to others.

1.1. Research Objectives

This research aims at constructing the Community Forest Intention Model (CFIM), grounded in the relationships between Tourist Experience (TE), Satisfaction (SAT), and Sustainable Intention (SI), in the context of community-based ecotourism. Our research objectives are

- To evaluate the influence of Tourist Experience (TE) on Satisfaction (SAT);
- To analyze the effect of Satisfaction (SAT) on Sustainable Intention (SI), including conservation support;
- To develop and validate the Community Forest Intention Model (CFIM) using Partial Least Squares Structural Equation Modeling (PLS-SEM).

1.2. Research Significance

This research advances both theoretical and practical understanding of sustainable ecotourism in community forests.

1. **Theoretical Contribution:** In this study, we propose an integrated model linking experience, satisfaction, and sustainable intention, contributing to ecotourism and community-based tourism scholarship.
2. **Societal Impact:** By identifying the most influential experience factors, the findings can help design more engaging and educational visitor activities that foster community awareness and environmental stewardship.
3. **Managerial Implications:** The results offer actionable insights for improving service quality, enhancing program design, and strengthening the connection between tourists and local communities, supporting the growth of sustainable tourism development at Suan Pa Ket Nom Klao.

2. Literature Review

In community-based ecotourism, tourist behavior is shaped not only by situational enjoyment but also by underlying psychological processes involving experience interpretation, motivation development, and goal-directed intention. Understanding how these

elements interact is crucial for promoting sustainable actions among visitors. The theory of Self-Regulation of Attitudes, Intentions, and Behavior offers a comprehensive model for analyzing how individuals form and translate desires into goal-oriented behavior [7]. This theory is particularly relevant to examining the progression from tourist experience to sustainable behavior in community forest contexts such as Suan Pa Ket Nom Klao.

In the context of tourism, this theory suggests that tourists first internalize experiences (e.g., through learning, interaction, or emotional response [8]), which then shape their satisfaction. If aligned with their personal or social values, this satisfaction evolves into a concrete intention to act, such as supporting local conservation or applying sustainable practices after the visit.

Several studies in tourism and environmental psychology have adopted self-regulatory frameworks to explain visitor behavior. For example, Lam and Hsu [9] applied goal-directed models to predict responsible tourist behavior, while Han and Kim [10] examined how moral obligation affects pro-environmental intentions in ecotourism settings [11]. These studies confirm that tourist behavior is not simply reactive, but rather regulated through values, goals, and deliberate intentions, supporting the applicability of Bagozzi's theory [7].

In community forest settings where tourists engage with environmental and cultural elements, motivation and intention are particularly relevant [11]. Experiences such as learning about forest conservation, participating in guided activities, or buying local eco-friendly products contribute to a sense of purpose and potentially long-term sustainable behavior.

2.1. Tourist Experience

Ensuring favorable visit experiences is crucial for destination marketers and managers aiming to increase visitor satisfaction and loyalty [12]. Broadly speaking, tourist experience is defined as a person's subjective assessment of events related to travel, beginning with planning and preparation and continuing during and after the trip, often structured in a hierarchical time sequence [13]. These experiences are highly personal and can vary significantly depending on factors such as individual motives, personality traits, social background, destination type, and activity characteristics [14].

Scholars have operationalized tourist experience in various ways, often through multi-dimensional constructs. For example, Kang and Gretzel [15] identify learning, escape, and enjoyment as three core dimensions, while Chang and Hung [16] propose a broader structure encompassing learning, recreation, exhibitions, service, food, facilities, and souvenirs.

This study draws on Chang and Hung's framework as its theoretical basis. However, empirical testing using Partial Least Squares Structural Equation Modeling (PLS-SEM) revealed that only three dimensions, namely, Service Quality, Accessibility, and Learning Engagement, demonstrated statistical validity in the context of Suan Pa Ket Nom Klao. This refinement reflects the site's ecotourism-specific characteristics, where learning, environmental accessibility, and community-led service interactions dominate the visitor journey.

Thus, the tourist experience in this study is conceptualized as a second-order formative construct, composed of the following:

- Service Quality—The perceived quality of staff interactions, responsiveness, and service delivery.
- Accessibility and Information—The ease of access to the site, signage, directions, and informational support.
- Learning Engagement—Opportunities for education about the forest, sustainability practices, and local culture.

These dimensions represent the key touchpoints of the visitor experience and are hypothesized to influence both satisfaction and sustainable behavioral intention. This refinement does not dismiss the broader framework of Chang and Hung but rather highlights the most impactful components in the specific context of a community forest.

2.2. Research Hypothesis

Based on the literature, the following hypotheses are proposed:

H1. *Tourist Experience (TE) has a positive influence on Satisfaction (SAT).*

Formative measurement hypotheses (for second-order formative construct TE):

H1a. *Service Quality positively influences Tourist Satisfaction.*

H1b. *Accessibility and Information availability positively influences Satisfaction.*

H1c. *Learning Engagement positively influences Satisfaction.*

H2. *Satisfaction has a positive influence on Sustainable Intention (SI).*

Figure 1 visually represents these hypothesized relationships, positioning TE and SAT as key predictors of SI. This framework serves as the key foundation for our hypothesis.

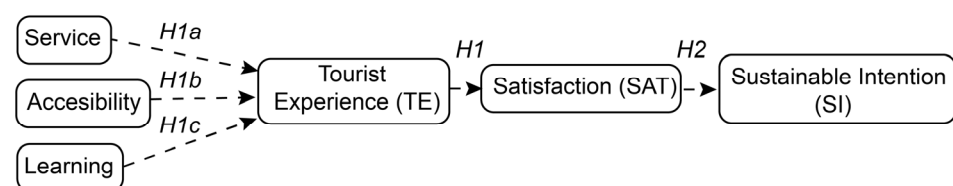


Figure 1. Community Forest Intention Model (CFIM).

3. Methodology

In this study, we employed the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach to predict tourists' behavioral intention based on their experiential and satisfaction factors. To ensure consistent exposure to the tourism offerings, all participants were required to engage in six designated activities at the community forest prior to completing the questionnaire. These activities included (1) taking a photo at the entrance gate, (2) walking the forest trail, (3) observing a stingless bee demonstration, (4) making an herbal inhaling balm, (5) crafting an herbal compress ball, and (6) visiting the souvenir shop. Each participant completed all six experiences within a time frame of approximately 20 to 30 min on-site. Immediately after the activities, participants were asked to complete a structured questionnaire designed to capture their perceptions of the experience, satisfaction, and behavioral intention. This controlled sequence ensured that all respondents evaluated their experience based on the same exposure to tourism services, allowing for consistency in data interpretation within the PLS-SEM framework.

3.1. Measurement Instrument

The measurement instrument used in this study was designed to assess four key constructs: Forest Intention Model (FIM), Tourist Experience (TE), Satisfaction (SAT), and Sustainable Intention (SI). All constructs were measured using multiple-item scales adapted from validated instruments in previous research. Each item was rated on a 5-point Likert scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree"), to capture the respondents' level of agreement with each statement. To reduce potential response bias

and enhance data quality, the questionnaire included a combination of positively and negatively worded items. The questionnaire was administered in both Thai and English to accommodate a diverse group of participants, including domestic and international tourists. Table 1 presents the complete list of measurement items for each construct, along with their respective sources.

Table 1. Construct measurement scales.

Constructs
Service-1: The community forest staff were helpful and have enough knowledge [17].
Service-2: You are satisfied with the overall quality of service during your visit [18].
Accessibility-1: The community forest was easily accessible and well-signposted [19].
Accessibility-2: Transportation options to and from the community forest were convenient [19].
Learning-1: The learning program offered in the forest had sufficient substance to be engaging [15].
Learning-2: You have learned a lot about sustainability and conservation efforts [20].
Satisfaction-1: Overall, you are satisfied with your visit to the community forest [21].
Satisfaction-2: The overall experience you had in the community forest satisfies you [22].
Sustainable Intention-1: You have intention of adopting sustainable practices in your daily life, such as reducing waste and recycling [11].
Sustainable Intention-2: You intend to advocate for environmental conservation and sustainability in your community as a result of your experience at the community forest [22].

3.2. Data Collection

Data were collected using an on-site questionnaire survey administered immediately after the structured activities. The on-site approach allowed the researcher to gather immediate and context-specific responses, minimizing recall bias and enhancing data accuracy [23]. The survey was administered face-to-face to three distinct groups of participants: corporate social responsibility (CSR) groups, educational study groups, and international tourists. This purposive sampling approach ensured a diverse range of visitor perspectives relevant to the forest's multifunctional use. A total sample size of 128 observations was collected using structured questionnaires at key rest areas and activity zones within the forest. This cross-sectional design is widely applied in tourism and visitor experience studies to assess perceptions, satisfaction, and behavioral intentions in natural and cultural environments. The dataset generated and analyzed during this study is available in the Supplementary Materials.

3.3. Respondents' Profile

Among the 128 respondents, 57.8% were female and 42.1% were male (Table 2). The most common age group was 15–25 years (42.96%), followed by 56 and above (24.33%). In terms of nationality, Thai tourists made up 39.84%, followed by Asian tourists (excluding Thai) at 32%, and Western tourists at 28.12%. Regarding group participation, 78.9% of respondents had been involved in similar tourism groups for 1–2 years, 7.81% for 3–4 years, and 13.28% for 5 years or more.

Table 2. Respondents' profile.

Item	Option	Frequency	Percentage
Gender	Female	74	57.8
	Male	54	42.1
Age	15–25	55	42.96
	26–35	22	17.18
	36–45	13	10.16
	46–55	7	5.47
	56+	31	24.33
Nationality	Asian tourist (excluding Thai)	41	32
	Thai tourist	51	39.84
	Western tourist	36	28.12
Years of Ecotourism Experience	1–2 years	101	78.91
	3–4 years	10	7.81
	Equal to or more than 5 years	17	13.28

3.4. Data Analysis Methods

Data analysis was performed using SmartPLS software version 4.1.1.4 [24]. Initially, descriptive statistics were used to summarize the demographic characteristics of the respondents, highlighting central tendencies and variability within the dataset. Subsequently, a series of statistical tests were employed to evaluate the validity and reliability of the measurement model, including the following:

- Normality tests: Mardia's multivariate skewness and kurtosis were examined to assess multivariate normality.
- Common method bias: Full collinearity tests were conducted to detect any potential bias arising from the data collection method.
- Measurement model assessment: Convergent and discriminant validity were assessed using factor loadings, Cronbach's alpha, composite reliability (CR), average variance extracted (AVE), and variance inflation factor (VIF).
- Structural model assessment: The structural model was evaluated by examining the explanatory power (R^2), path coefficients, hypothesis testing results, and predictive relevance using SmartPLS.

4. Results

4.1. Data Quality Assessment

4.1.1. Normality Test

The data were collected from the survey, and multivariate normality was tested as suggested by Qiu et al. [25] and Hair et al. [26]. The results revealed significant deviations from multivariate normality (skewness $z = 295.68$; $p < 0.001$; kurtosis $z = 4.44$; $p < 0.001$). Additionally, several indicators demonstrated significant univariate skewness and kurtosis. Given that PLS-SEM is robust to non-normal data, the analysis proceeded using bootstrapping procedures to estimate path significance. A 10,000-sample bootstrap resampling approach was applied to ensure the robustness of the parameter estimates.

4.1.2. Common Method Variance (CMV) and Collinearity

To evaluate potential CMV and multicollinearity, full collinearity testing was conducted based on Kock [27]. All variance inflation factor (VIF) values for both the outer model indicators and structural model constructs were well below the conservative threshold of 3.3, indicating that neither CMV nor multicollinearity posed a threat in the current model (Table 3).

Table 3. Full collinearity testing.

Construct	Indicators	VIP Range
Service	Service-1, 2	1.497
Accessibility	Accessability-1, 2	1.242
Learning	Learning-1, 2	1.165
Satisfaction	Satisfaction-1, 2	1.159
Sustainable Intention	Sustainable Intention-1, 2	1.465

4.2. Measurement Model Assessment

4.2.1. Convergent Validity

Convergent validity was assessed using factor loadings, Cronbach's alpha, composite reliability (CR), average variance extracted (AVE), and variance inflation factors (VIFs). All constructs showed factor loadings above 0.70, indicating strong item reliability (Table 4). The relatively low Cronbach's alpha values for the Learning and Satisfaction constructs are likely due to the small number of items. In PLS-SEM, Cronbach's alpha is considered less critical than composite reliability. All constructs demonstrated CR values ranging from 0.812 to 0.881, indicating good internal consistency and reliability. Additionally, all AVE values exceeded 0.68, confirming good convergent validity and supporting the interpretability of the constructs within the model. Finally, all VIF values were well below the conservative threshold (1.159–1.497), indicating the absence of any multicollinearity issues.

Table 4. Convergent validity and multicollinearity assessment.

Construct	Indicators	Loadings	Cronbach's Alpha (a)	Composite Reliability (CR)	Average Variance Extracted (AVE)	Variance Inflation Factor (VIF)
Service	Service-1	0.888	0.731	0.881	0.788	1.497
	Service-2	0.887				
Accessibility	Accessibility-1	0.823	0.612	0.837	0.720	1.242
	Accessibility-2	0.873				
Learning	Learning-1	0.843	0.547	0.815	0.688	1.165
	Learning-2	0.815				
Satisfaction	Satisfaction-1	0.796	0.541	0.812	0.684	1.159
	Satisfaction-2	0.857				
Intention	Intention-1	0.895	0.721	0.877	0.781	1.465
	Intention-2	0.873				

4.2.2. Discriminant Validity

Discriminant validity was evaluated using the Heterotrait–Monotrait Ratio (HTMT). Most construct pairs showed HTMT values below the threshold of 0.90, supporting adequate discriminant validity (Table 5). However, the HTMT value between Satisfaction and Learning exceeded the recommended limit (HTMT = 1.197). Despite this, the two constructs were retained due to conceptual distinctiveness: Satisfaction reflects an emotional response, while Learning captures cognitive gains, particularly within an ecotourism and sustainability context.

Table 5. Discriminant validity (HTMT).

Construct	Accessibility	Intention	Learning	Satisfaction	Service
Accessibility	-				
Intention	0.551	-			
Learning	0.732	0.646	-		
Satisfaction	0.891	0.798	1.197	-	
Service	0.585	0.623	0.619	0.864	-

4.2.3. Pearson Correlations

The Pearson correlation coefficients among the constructs are presented in Table 6. All correlations are significant at the 0.05 level. Accessibility shows moderate positive correlations with Learning ($r = 0.426$), Intention ($r = 0.356$), Satisfaction ($r = 0.509$), and Service ($r = 0.386$). Learning is positively correlated with Intention ($r = 0.404$), Satisfaction ($r = 0.659$), and Service ($r = 0.391$). Intention is also positively correlated with Satisfaction ($r = 0.502$) and Service ($r = 0.456$). Finally, Satisfaction and Service show a moderate positive correlation ($r = 0.546$).

Table 6. Pearson correlations.

Construct	Accessibility	Learning	Intention	Satisfaction	Service
Accessibility	-				
Learning	0.426 *	-			
Intention	0.356 *	0.404 *	-		
Satisfaction	0.509 *	0.659 *	0.502 *	-	
Service	0.386 *	0.391 *	0.456 *	0.546 *	-

* Significant at 0.05 level.

4.3. Structural Model Assessment

4.3.1. Structural Model

The structural model investigates the relationships among experiential factors (Accessibility, Learning, and Service), Tourist Satisfaction, and Sustainable Intention as the outcome variable. This framework tests how various components of the tourism experience influence tourists' overall satisfaction and, subsequently, their behavioral intention toward sustainability. Accessibility, Learning, and Service function as predictor variables for Satisfaction, which in turn serves as the sole predictor of Sustainable Intention. This model aims to validate the hypothesized pathways and assess how well experiential quality translates into sustainable behavioral outcomes within the context of community-based ecotourism.

4.3.2. Model Explanatory Power

The model explained 56.2% of the variance in Satisfaction ($R^2 = 0.562$), indicating moderate to strong explanatory power (Table 7), as per Cohen [28]. Effect sizes (f^2) showed Learning as the strongest contributor ($f^2 = 0.368$, large effect), followed by Service ($f^2 = 0.148$, medium effect) and Accessibility ($f^2 = 0.069$, small effect). For the Sustainable Intention construct, the model showed weak-to-moderate explanatory power, with an R^2 of 0.252 and an adjusted R^2 of 0.246, indicating that 25.2% of the variance in Sustainable Intention was explained by Satisfaction alone. Although the effect size of Satisfaction was small ($f^2 = 0.069$), it still indicates a meaningful contribution, particularly when considering behavioral constructs, which often have lower R^2 values in applied research.

Table 7. Model summary.

Construct	Predictors	R Square	Adjusted R Square	f-Square
Satisfaction	Accessibility, Learning, Service	0.562	0.551	Accessibility (0.069), Learning (0.368), Service (0.148)
Sustainable Intention	Satisfaction	0.252	0.246	Satisfaction (0.069)

4.3.3. Path Coefficient

The structural model was analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4 [29] to examine the relationships among Accessibility, Learning, Service, Satisfaction, and Intention. The standardized path coefficients (β), significance levels (p -values), tolerance, and variance inflation factor (VIF) are presented in Table 8. The results revealed significant positive effects of Accessibility ($\beta = 0.180$; $p < 0.010$), Learning ($\beta = 0.413$; $p < 0.000$), and Service ($\beta = 0.249$; $p < 0.001$) on Satisfaction, with Learning demonstrating the strongest influence among the predictors. Satisfaction, in turn, exhibited a substantial positive effect on Intention ($\beta = 0.502$; $p < 0.000$), highlighting its critical role as a mediator in the model. All p -values were below the 0.05 threshold, indicating statistical significance for all hypothesized paths, as confirmed by bootstrapping with 10,000 samples ($t > 1.96$; [29]).

Table 8. Model coefficients and multicollinearity indices.

Path	Beta	Significance (p -Value)	Tolerance	VIF
Accessibility -> Satisfaction	0.180	<0.010	0.805	1.242
Learning -> Satisfaction	0.413	<0.000	0.858	1.165
Service -> Satisfaction	0.249	<0.001	0.668	1.497
Satisfaction -> Intention	0.502	<0.000	0.863	1.159

Collinearity statistics further supported the model's robustness, with tolerance values ranging from 0.668 (Service) to 0.863 (Satisfaction), all exceeding the minimum acceptable level of 0.2, and VIF values ranging from 1.159 (Satisfaction) to 1.497 (Service), all below the critical threshold of 5. These findings suggest the absence of multicollinearity issues among the predictor constructs, thereby ensuring the stability and reliability of the path coefficients. The results underscore the pivotal roles of Learning and Satisfaction in driving behavioral intentions, with practical implications for enhancing service quality and learning experiences to improve satisfaction and subsequent intentions.

4.4. Hypothesis Testing Results

The structural model analysis confirmed that all hypothesized relationships were statistically significant (Table 9). Accessibility demonstrated a positive and significant effect on Satisfaction ($\beta = 0.200$; $t = 2.585$; $p = 0.010$), while Learning exhibited the strongest influence on Satisfaction ($\beta = 0.461$; $t = 6.358$; $p < 0.001$). Service also significantly contributed to Satisfaction ($\beta = 0.288$; $t = 3.471$; $p = 0.001$), reinforcing its relevance in shaping positive visitor experiences. Additionally, Satisfaction significantly predicted Sustainable Intention ($\beta = 0.502$; $t = 6.062$; $p < 0.001$), highlighting its pivotal mediating role in influencing tourists' future behavioral intentions. These findings collectively support all proposed hypotheses, providing robust empirical evidence for the model's theoretical pathways.

Table 9. Hypotheses supported.

Path	β (O)	t-Value	p-Value
Accessibility → Satisfaction	0.200	2.585	0.010
Learning → Satisfaction	0.461	6.358	0.000
Service → Satisfaction	0.288	3.471	0.001
Satisfaction → Intention	0.502	6.062	0.000

4.5. Model Predictive Power

Smart Partial Least Squares Predict Analysis

Table 10 presents the Q^2 predictive relevance values and Root Mean Square Error (RMSE) comparisons between the PLS-SEM model and a linear regression benchmark.

Table 10. PLS predict.

	Q^2 Predict	PLS-SEM_RMSE	LM_RMSE	PLS-LM
Satisfaction-1	0.188	0.663	0.676	−0.013
Satisfaction-2	0.182	0.709	0.733	−0.024
Intention-1	0.307	0.658	0.663	−0.005
Intention-2	0.408	0.454	0.458	−0.004

The Q^2 values, ranging from 0.182 to 0.408, suggest that the PLS-SEM model demonstrates acceptable predictive relevance for all measured indicators. Furthermore, the PLS-SEM model yielded lower RMSE values than the linear model across all items. Although the differences are marginal, this indicates slightly superior predictive accuracy of the PLS approach, reinforcing its appropriateness for modeling behavioral constructs in this context.

Figure 2 illustrates the structural model along with the path coefficients and R^2 values. The model shows that Service ($p = 0.001$), Accessibility ($p = 0.010$), and Learning ($p < 0.001$) have statistically significant positive effects on Satisfaction. In turn, Satisfaction significantly predicts Intention ($p < 0.001$). The R^2 value for Satisfaction is 0.562, indicating that 56.2% of its variance is explained by the combined influence of Service, Accessibility, and Learning. Meanwhile, the R^2 value for Intention is 0.252, suggesting that Satisfaction alone accounts for 25.2% of the variance in tourists’ Sustainable Intention. All structural paths are statistically significant at $p < 0.05$, confirming the strength and validity of the proposed conceptual model.

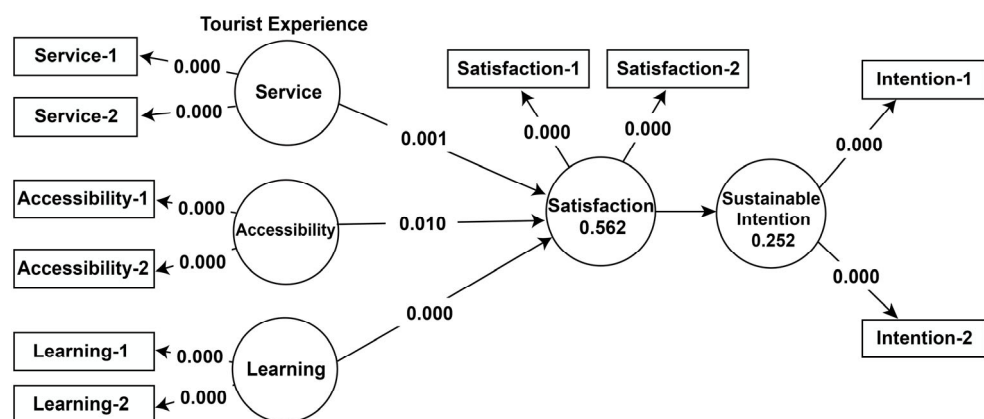


Figure 2. Structural model and hypothesis testing results.

5. Discussion

The findings of this study offer empirical support for the proposed structural model examining the influence of Service, Accessibility, and Learning on Satisfaction, and subsequently, Satisfaction on Sustainable Intention. The results confirm that Learning had the most substantial impact on Satisfaction, consistent with past ecotourism research highlighting the importance of cognitive and educational experiences in shaping tourist satisfaction [30]. This suggests that when tourists gain meaningful knowledge related to sustainability, conservation, or local culture, their satisfaction levels increase significantly.

Service Quality also had a statistically significant and positive impact on Satisfaction. This aligns with the work of Chen and Tsai [21], who found that service encounters are central to positive tourist experiences and repeat visitation. Quality service such as guidance, hospitality, and attention to detail enhances the emotional evaluation tourists form, reinforcing the value of personal interaction and professional service delivery in community-based tourism.

The role of Accessibility was still significant despite its smaller effect size. This supports the findings of Biswas et al. [19], who noted that easy access to attractions, transportation, and clear infrastructure layout positively affect overall tourist perceptions. Although less impactful than Learning or Service, Accessibility remains a necessary condition for facilitating participation in community forest activities.

The results also underscore the mediating role of Satisfaction in influencing Sustainable Intention. Tourists who are more satisfied with their experiences are more likely to intend to revisit or recommend sustainable tourism practices. This is consistent with prior studies that have established satisfaction as a critical antecedent of behavioral intention [18]. The findings confirm that emotional evaluations are strong predictors of sustainable behavior, reinforcing the importance of designing engaging, high-quality experiences in ecotourism contexts. Moreover, the predictive relevance (Q^2 values ranging from 0.182 to 0.408) and relatively low RMSE in PLS-Predict suggest that the model has acceptable predictive power, echoing recommendations by Shmueli et al. [31] on assessing out-of-sample prediction in PLS-SEM.

Overall, the structural model provides meaningful insights into how educational, logistical, and service-related elements contribute to sustainable tourism behaviors through satisfaction. These results provide a theoretical foundation and practical guidance for community-based tourism planners aiming to enhance visitor experiences and foster pro-environmental behavior.

In this study, we successfully developed and validated the Community Forest Intention Model (CFIM), demonstrating the pivotal role of Tourist Experience (TE) in shaping Tourist Satisfaction (SAT) and Sustainable Intention (SI) within the context of community-based ecotourism at Suan Pa Ket Nom Klao. The findings confirm that Learning Engagement, Service Quality, and Accessibility significantly enhance SAT, with Learning Engagement being the most influential factor ($\beta = 0.461$; $p < 0.001$). SAT mediates the relationship between TE and SI, driving intentions to adopt sustainable practices and advocate for conservation ($\beta = 0.502$; $p < 0.001$). The model's explanatory power ($R^2 = 0.562$ for SAT; $R^2 = 0.252$ for SI) and predictive relevance ($Q^2 = 0.182$ – 0.408) underscore its robustness. These results offer theoretical contributions by integrating experience, satisfaction, and intention within a self-regulatory framework, while providing practical guidance for ecotourism managers to prioritize educational programs and high-quality service delivery. Future research could explore additional experiential dimensions or lon-

itudinal effects to further refine the CFIM and enhance its applicability across diverse ecotourism contexts.

6. Conclusions

This study validates the Community Forest Intention Model (CFIM) using Partial Least Squares Structural Equation Modeling (PLS-SEM) to explore the relationships among Tourist Experience (TE), Satisfaction (SAT), and Sustainable Intention (SI) at Suan Pa Ket Nom Klao, Thailand. Data collected from participants engaging in six structured ecotourism activities show that TE, encompassing service quality, accessibility, and learning engagement, significantly influences SAT, with learning engagement emerging as the strongest contributor. SAT, in turn, positively predicts SI, confirming its mediating role. All hypothesized paths are supported, reinforcing the model's validity. The model demonstrates meaningful explanatory power for both SAT and SI, offering practical insights for enhancing educational programs and service quality to foster sustainable behaviors in ecotourism settings.

The overlap observed between Satisfaction and Learning suggests some conceptual closeness, yet this is consistent with the ecotourism context, where educational experiences strongly shape emotional satisfaction. The relatively low internal consistency for the Learning and Satisfaction constructs is likely due to the limited number of measurement items, but this does not undermine the overall validity of the model since composite reliability and convergent validity are acceptable. These findings highlight the importance of refining measurement design in future research to strengthen discriminant validity and reliability, while confirming the robustness of the CFIM as a useful framework for guiding ecotourism strategies.

Supplementary Materials: Questionnaire results: The following supporting information can be downloaded at: <https://doi.org/10.5281/zenodo.15848331>. Accessed on 9 July 2025.

Author Contributions: Conceptualization, S.T.; methodology, K.K.; software, P.K.; validation, B.T.; formal analysis, S.B.; investigation, P.P.; resources, K.K.; data curation, S.T.; writing—original draft preparation, S.T.; writing—review and editing, P.K.; visualization, K.K.; supervision, P.P.; project administration, S.T.; funding acquisition, S.T. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by (i) King Mongkut's University of Technology Thonburi (KMUTT), (ii) Thailand Science Research and Innovation (TSRI), and (iii) the National Science, Research and Innovation Fund (NSRF), fiscal year 2024, under project number FRB670016/0164.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki, and approved by the Institutional Review Board of King Mongkut's University of Technology Thonburi (protocol code: KMUTT-IRB-2024-0820-253) on 26 August 2024.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Acknowledgments: We express our sincere gratitude to Prempree Trirat, Community Forest Manager, for graciously permitting the collection of data at Suan Pa Ket Nom Klao, thereby facilitating the successful execution of this research. Verbal consent to be acknowledged was obtained.

Conflicts of Interest: The authors declare no conflicts of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript; or in the decision to publish the results.

Abbreviations

The following abbreviations are used in this manuscript:

CFIM	Community Forest Intention Model
TE	Tourist Experience
SAT	Tourist Satisfaction
SI	Sustainable Intention
PLS-SEM	Partial Least Squares Structural Equation Modeling
CSR	Corporate Social Responsibility
CR	Composite Reliability
AVE	Average Variance Extracted
VIF	Variance Inflation Factor
HTMT	Heterotrait–Monotrait Ratio
RMSE	Root Mean Square Error
Q ²	Predictive Relevance

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