

## PUSH-PULL FACTORS AFFECTING WILLINGNESS TO PAY FOR COMMUNITY-BASED HEALTH TOURISM IN SOUTHERN THAILAND: A STRUCTURAL EQUATION MODELING APPROACH

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**Abstract:** Community-based health tourism has emerged as a significant segment within the global wellness tourism industry, yet the economic valuation of such experiences remains insufficiently understood. This investigation seeks to explore push-pull factors impacting tourists' willingness to pay (WTP) for community-based health tourism in the Mae Tom Subdistrict of Songkhla Province in Thailand. The study addresses critical gaps including the limited application of push-pull theory in community-based health tourism contexts, the underrepresentation of community-based approaches in health tourism research, and the absence of integrated structural equation models examining hierarchical push-pull relationships with WTP. The data from 413 tourists were analyzed using structural equation modeling (SEM) with a hierarchical factor structure, incorporating push-pull theory with an understanding of WTP using confirmatory factor analysis (CFA) and structural modeling. Push factors were operationalized as a second-order construct encompassing internal needs, attitude toward health tourism, information perception, health tourism values, and tourism experience, while pull factors comprised destination image, value for money, health activities, and tourism information. The analysis revealed that both push factors ( $\beta = 0.21$ ,  $p < 0.01$ ) and pull factors ( $\beta = 0.23$ ,  $p < 0.01$ ) had a significant impact on WTP, with pull factors exerting a more substantial influence. The internal needs had the highest loading ( $\lambda = 0.83$ ) among push factors, while destination image had the highest loading ( $\lambda = 0.80$ ) among pull factors. The model demonstrated an acceptable fit and consequently explained 42% of the variance in WTP. Conclusions suggest that pull factors supersede the normative view of push factors having greater dominance in the context of community-based health tourism. The findings advance theoretical knowledge and provide evidence-based guidance for sustainable tourism development strategies that emphasize destination credibility, authentic community participation, and the preservation of local health wisdom in southern Thailand.

**Keywords:** community-based health tourism, push-pull theory, willingness to pay, structural equation modeling, Thailand

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### INTRODUCTION

Global health tourism markets have demonstrated substantial expansion, with industry valuations reaching USD 31.23 billion in 2024 and expected growth to USD 162.80 billion by 2032, or a 23% annual growth rate. Global health tourism markets have shown significant expansion (Fortune Business Insights, 2024). The COVID-19 pandemic has caused consumers to prioritize wellness, which has accelerated this remarkable development (Global Wellness Institute, 2023). With a 24.40% market share in Asian health tourism, Thailand has become a regional leader (Grand View Research, 2024).

Community-based health tourism represents an evolutionary approach that integrates local knowledge systems, natural healing elements, and community participation, rather than relying solely on institutional medical facilities (Heydari et al., 2019). This model provides distinctive value propositions through authentic cultural encounters, traditional healing methods, and sustainable development that directly benefit local communities. Southern Thailand, especially in Songkhla Province, has potential for the development of community-based health tourism. Mae Tom Sub District represents this possibility in natural resources, knowledge of traditional health, and existing community tourism infrastructure. The fragmented health-related activities available in the area include traditional Thai massage, herbal medicine making and manufacturing, organic farming assistance, and nature-based relaxation services (Tourism Authority of Thailand, 2023).

Knowledge of tourists' willingness to pay (WTP) for such an experience is essential for developing sustainable tourism. WTP is the highest price customers are willing to pay for a product or service, and it reflects how much they value the product and whether market conditions are favorable. In tourism settings, WTP is a complex interplay of experiential motivation, perceived quality, and expected satisfaction (Ezeh & Dube, 2024). The theory of push-pull is another theory that develops a sound theory of tourism motivation as developed by Dann (1977) and refined by Crompton (1979).

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Push factors are internal psychological elements that generate the desire to travel, whereas pull factors are destination features that attract tourists to destinations. A combination of this motivational framework with structural equation modeling enables the research to analyze several causal pathways and hierarchical relationships between factors simultaneously (Hair et al., 2010). Although it has been widely used in research in the tourism industry, little literature has incorporated the use of push-pull theory together with WTP analysis in the context of community-based health tourism. This study fills some of the most important gaps in the existing literature. To begin with, push-pull theory has been well employed in general tourism, but its use in community-based health tourism is minimal. Second, several health tourism research studies focus on medical tourism in metropolitan areas, overlooking community-based strategies that emphasize local wisdom. Third, the research on WTP in Thai tourism settings mainly focuses on major cities, but not small southern locations. Fourth, health tourism literature lacks structural equation models that study causal relationships among push-pull factors and WTP. The proposed study seeks to: (1) identify the push and pull factors that affect tourist WTP in community-based health tourism; (2) formulate and test a structural equation model of causality between the factors; and (3) offer evidence-based sustainable tourism development.

## LITERATURE REVIEW

### Tourism Motivation Push-Pull Theory

Push-pull theory, since the time of its introduction by Dann (1977), has played a fundamental role in tourism motivation research in that internal socio-psychological factors in the form of push factors, and external destination characteristics in the form of pull factors create the desire to travel. Crompton (1979) developed this theory by empirical research, which found that there are nine different motives to travel to a pleasure vacation, namely seven push factors such as escape, perceived mundane environment, exploration and self-evaluation, relaxation, prestige, regression, strengthening of kin relationship, and pull factors of sophisticated and education. In modern times, these traditional categories have been developed by modern-day scholarship to accommodate the changing patterns of tourism. Bayih & Singh (2020) showed that the push factors are usually dominant in making domestic tourism decisions. Similarly, Godlewska et al. (2023) demonstrated that both push and pull factors significantly influence health resort destination selection, with pull factors related to therapeutic environment and service quality playing a decisive role in health-seeking tourists' decision-making processes. In contrast, the pull factors vary in power depending on the nature of the tourist and the nature of the destination. The hierarchical aspect of the push-pull theory implies that individual motivational dimensions do not work as independent predictors but instead as broader push and pull forces. This approach is in line with second-order factor modelling approaches that should be conducted on complex motivational constructs (Hair et al., 2010).

### Health Tourism Motivation Frameworks

Health tourism motivation research has evolved beyond traditional push-pull applications to address the distinctive characteristics of wellness-seeking behavior. Ha et al. (2021) provided a quantitative analysis of push and pull factors influencing medical tourism destination choice, establishing validated measurement scales that demonstrate the multifaceted nature of health tourism motivations. Their research revealed that health tourism contexts introduce distinctive push factors, particularly health consciousness, wellness lifestyle adoption, and preventive health-seeking behaviors.

The operationalization of push factors in health tourism encompasses internal needs for novel health experiences and authentic community engagement (Crompton, 1979) attitudes toward health tourism representing evaluative orientations regarding wellness benefits, information perception addressing receptivity to health communications, values encompassing belief systems regarding community development impacts, and tourism experience reflecting previous travel influence on current motivations. Pull factors in health tourism comprise destination image encompassing perceptions of credibility and safety (Kontogeorgopoulos et al., 2014), value for money including cost-benefit evaluations across services and facilities (Grilli et al., 2021), health activities covering specific wellness services and traditional practices, and tourism information addressing adequacy and accessibility of destination materials that facilitate decision-making.

### Willingness to Pay in Tourism Contexts

Willingness to pay tourism research has evolved from straightforward price sensitivity measurements to constructs encompassing diverse value perceptions. The theoretical foundation draws from environmental economics, where contingent valuation methods were initially developed to assess non-market goods and services (Loomis et al., 2000). Contemporary health tourism willingness to pay encompasses service quality expectations, anticipated health outcomes, perceived cultural authenticity, and sustainability considerations. This multidimensional conceptualization aligns with value-belief frameworks in tourism research, wherein personal values and normative beliefs shape tourists' willingness to engage in financially supportive behaviors toward sustainable destinations (Landon et al., 2018). Ezeh & Dube (2024) examined relationships between willingness to pay and sustainability in tourism through an analysis of tourist preferences and payment behaviors. Their approach supports structural equation modeling for examining willingness to pay relationships in health tourism contexts where multiple value dimensions operate simultaneously. The complexity reflects the experiential nature of health tourism, where value extends beyond tangible service attributes to include emotional, social, and transformative dimensions. Dodds (2013) investigated tourists' willingness to pay for environmental conservation in Thai destinations, finding that perceived destination credibility and environmental quality significantly influence payment decisions. This research established precedent for willingness to pay studies in Thai tourism contexts, though focus remained on environmental rather than health tourism applications. More recently, Inprasertkul et al. (2025) extended this line of inquiry by examining willingness to sacrifice among visitors to coastal geographies in Thailand, demonstrating that value orientations toward green tourism mediate the relationship between environmental attitudes and tourists' economic commitment to sustainable destination management.

### **Development of Community-Based Tourism**

Community-based tourism represents a shift in thinking from traditional mass tourism to development models that are participatory and embedded within the local context, stressing ownership by and benefit to the community. Kontogeorgopoulos et al. (2014) looked at the factors that contribute to booming community-based tourism in Thailand. They found that success was related to the development success and stability of three factors: local leadership, outside or external support in the form of knowledgeable and skilled people not from that community, and circumstances that support favorable development (i.e., political support, tourism interest, and conditions suitable for tourism).

They also emphasized a balance between the authenticity of tourism and the market readiness to tourism situations. The emergence of health and wellness activities in community-based tourism development models represents one of the significant trends in tourism development, offering distinctive value through authentic cultural experiences, traditional healing practices, and sustainable development that directly supports community-based health and wellbeing. Khazae-Pool et al. (2024) identified key local drivers of community-based health tourism development, emphasizing that community engagement, indigenous knowledge systems, and local resource utilization are critical determinants of sustainable health tourism outcomes in non-urban settings. It is important to reiterate that health tourism places its value in a community's local knowledge systems and the use of natural resources for healing instead of a built institutional medical facility. Regional context affects how communities develop health tourism. Songkhla Province is significant for community-based health tourism research or practice because of its numerous cultural characteristics that combine Thai and Malay cultures, an established culturally based traditional approach for health, and the potential for local natural health care resources. The Tourism Authority of Thailand (2023) noted that Songkhla offers numerous opportunities for authentic, sustainable health tourism experiences, extending local culture through tourism and traditional healing practices that engage the community in health plans. Wellness tourism destination competitiveness in Thailand is shaped by a multidimensional cluster of factors encompassing service quality, natural resources, cultural heritage, and community participation, all of which align with the pull factor dimensions identified in the present study (Phuthong et al., 2023). Similarly, community-based wellness tourism destinations in the deep south of Thailand, such as Betong district in Yala Province, have demonstrated significant market potential through the integration of natural resources, traditional practices, and community tourism infrastructure, reflecting developmental patterns directly comparable to those observed in Songkhla Province (Praprom & Laipaporn, 2023).

### **Combining Push-Pull Theory and Willingness to Pay**

Relatively little work has integrated push-pull theory with willingness to pay research in tourism contexts, particularly specialized areas such as community-based health tourism. Push-pull theory has traditionally been used for behavioral intentions and destination choice, and not primarily economic decision-making processes. Extensions of motivational frameworks into behavioral and economic domains have demonstrated their applicability beyond traditional destination choice, as evidenced by Kiatkawsin et al. (2020), who applied an extended norm-activation model to examine the psychological antecedents of tourists' pro-sustainable behaviors, revealing that motivational constructs reliably predict economically relevant tourism decisions. To integrate motivational and economic constructs into a theoretical framework, it is essential to consider both internal psychological forces and external destination factors influencing payment decisions. Structural equation modeling has methodological advantages in examining complex relationships between motive factors and economic behaviors. The hierarchical conceptualization of push and pull as second-order constructs is also preferable to modeling causal relationships related to willingness to pay, while maintaining theoretical congruency and practical significance.

### **Gaps in Research and Theory Development**

The existing literature reveals gaps in our understanding of the processes in community-based health tourism. First, although the push-pull theory has been applied extensively in a general tourism context, it has not been applied to the community-based health tourism context, particularly regarding the theoretical hierarchy and the relationship to economic decision-making. Second, the majority of the research on health tourism has focused on medical tourism and medical institutions in metropolitan areas. While these studies contribute to our knowledge about health tourism, the community-based approach to health emphasizes local wisdom and traditional healing practices. The gap limits our understanding of how tourists evaluate and value experiencing authentic health tourism that is embedded in the local community. Third, willingness to pay studies in the Thai tourism literature focus primarily on major metropolitan destinations or environmental conservation. There has been little research on willingness-to-pay studies in smaller southern communities or on cultural tourism. This geographic bias limits knowledge about tourism economic behaviors in the region-specific context. Fourth, I find it surprising that there are no integrated structural equation models that have examined the causal and/or directional relationships of the hierarchical push-pull factors to health tourism willingness to pay in the literature. This methodological limitation impedes both theories and their application in tourism development.

### **Development of a Conceptual Framework**

Following the literature review, the current study interprets push factors as a higher-order construct that creates a superordinate container for internal needs, attitude to health tourism, information perception, values towards health tourism, and tourism experience. Conversely, pull factors are treated as a higher-order construct that encompasses destination image, value for money, health activities, and tourism information. These higher-order constructs have been proposed to positively influence willingness to pay for community-based health tourism in different ways. The research proposes a theoretical

framework that expands the original push-pull theory to include economic decision-making processes and opens the doors for empirical testing within community-based health tourism. This framework addresses existing gaps while remaining theoretically acceptable and practically valuable for sustainable tourism development practices.

**MATERIALS AND METHODS**

**1. Research Participants**

The research sample consisted of 413 tourists who traveled to Songkhla Province, Thailand. The sample size was calculated using Yamane's method (1976) with a population that included approximately 2.5 million annual tourists to Songkhla Province (Tourism Authority of Thailand, 2023), using a 95% confidence level and 5% margin of error. The characteristics of the sample included both domestic and international tourists who engaged with and/or exhibited interest in health and wellness tourism-related activities within Songkhla Province, using Mae Tom Subdistrict as a case study. Participants were recruited via purposive and convenience sampling methods during their visit for health tourism activities. The sample size of 413 exceeds the minimum requirements for SEM analysis, which typically recommends a minimum of 200 cases for complex models (Hair et al., 2010) or 10-15 observations per parameter (Bentler & Chou, 1987)."

**2. Research Tool**

A questionnaire was employed as the instrument for data collection in this research. The questionnaire was prepared in the Thai language and consisted of four sections. The first section included basic demographic characteristics (8 questions encompassing: gender, age, marital status, number of family members, educational background, occupation, monthly income, and interest in community-based health tourism). The second section was related to push factors driving community-based health tourism (29 questions split among five constructs: internal needs-INT (8 questions), attitude toward health tourism-ATT (9 questions), perception of information-PER (3 questions), values toward health tourism-VAL (5 questions), and tourism experience-EXP (4 questions)). The third section focused upon pull factors luring community-based health tourism (20 questions divided among four constructs: destination image-IMG (5 questions), value for money-VFM (5 questions), health activities-HAC (5 questions), and tourism information-INF (5 questions)). The last section measured willingness to pay for community-based health tourism services (5 questions measuring willingness to pay for dealing with: quality of health activities, unique experiences, safe and reliable services, supporting the local community, and restoration of health and wellness). Part 2, 3, and 4 questions used five-point Likert scales from 1 (strongly disagree) to 5 (strongly agree), while demographic questions used categorical response formats using multiple-choice answers. The conceptual model depicting the relationships among push and pull factors and willingness to pay is illustrated in Figure 1.

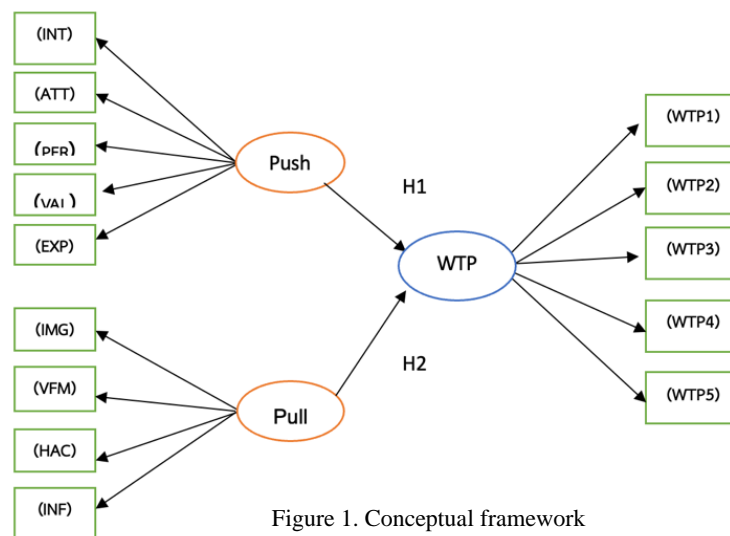


Figure 1. Conceptual framework

The reliability for the questionnaire was calculated using the Cronbach's alpha reliability coefficient with a group of 30 respondents with characteristics similar to the sample.

The reliability for the questionnaires was at 0.89, which had a perceived confidence value of 0.7 or higher; thus, it can be said that these questionnaire items are reliable. The validation by experts was conducted with five specialists in tourism and research methodology, yielding an IOC (Index of Item Objective Congruence) of .87.

**3. Data Collection and Analysis Procedures**

The collection of data has a total of two primary sources: the questionnaire and document analysis. For the questionnaire, participants were able to choose between completing it via a paper copy or through Google Forms. Participation was voluntary, and participants always had the option to withdraw if they chose to. The data was collected, in a research capacity, between July and September 2023, in different tourist locations throughout Songkhla Province. The locations included hotels, tourist attractions, transport stations, and community tourism areas. The research was ethically approved (Ethics Committee Reference: ECNIDA 2022/0140) to proceed with collecting data.

The quantitative data analysis included preliminary analysis in SPSS 29.0 (descriptive statistics, missing data analysis, outlier analysis, normality, and multicollinearity testing). Followed by analysis, the data underwent a Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) using AMOS 29.0 software. A second-order (hierarchical) CFA was employed to test the measurement models of push and pull factors, treating them as higher-order constructs comprising multiple first-order dimensions. This analytical approach aligns with established structural equation modeling frameworks, wherein hierarchical factor structures provide more parsimonious representations of complex motivational constructs than single-order models (Kline, 2016). In contrast, a first-order CFA was used to examine the willingness to pay construct, which consisted of directly observed indicators without intermediate latent variables. The fit of the models was evaluated using the ratio of chi-square to degrees of freedom ( $\chi^2/df < 2$ ; Tabachnick & Fidell, 2013), Root Mean Square Error of Approximation (RMSEA < 0.05; Browne & Cudeck, 1993), Comparative Fit Index (CFI > 0.95; Hu & Bentler, 1999), Goodness of Fit Index (GFI > 0.95; Jöreskog & Sörbom, 1984), and Adjusted Goodness of Fit Index (AGFI > 0.90; Jöreskog & Sörbom, 1984). The diagram of the Research Methodology Steps is illustrated in Figure 2.

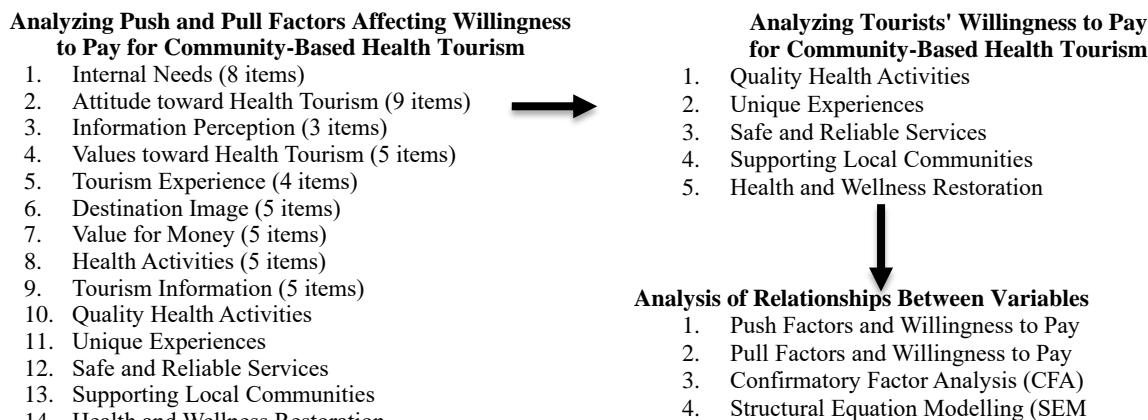


Figure 2. The Research Methodology Steps

**RESULTS AND DISCUSSION**

**1. Preliminary Data Analysis**

Normality assumptions were evaluated through skewness and kurtosis for all the observed variables during the data screening process. The analyses exhibited skewness values from -0.59 to -0.88 and kurtosis values from -0.58 to 0.37; all values were below the threshold of  $\pm 2$  for a normally distributed variable (Hair et al., 2010). The correlation analyses showed values between -0.09 and 0.94, with one correlation exceeding 0.80 (WTP1 and WTP4), which belonged to the same construct, so this raised no concerns about multicollinearity. The Kaiser-Meyer-Olkin measure yielded 0.819, exceeding the 0.50 threshold for factor analysis appropriateness. Bartlett's test of sphericity demonstrated statistical significance ( $\chi^2 = 3625.790, p = 0.000$ ), confirming variable independence and suitability for measurement model analysis as presented in Table 1.

Table 1. Correlation Coefficients of Observed Variables

|      | A1    | A2    | A3    | A4    | A5    | B1   | B2   | B3   | B4   | WTP1 | WTP2 | WTP3 | WTP4 | WTP5 |
|------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| A1   | 1.00  |       |       |       |       |      |      |      |      |      |      |      |      |      |
| A2   | 0.66  | 1.00  |       |       |       |      |      |      |      |      |      |      |      |      |
| A3   | 0.51  | 0.48  | 1.00  |       |       |      |      |      |      |      |      |      |      |      |
| A4   | 0.47  | 0.62  | 0.41  | 1.00  |       |      |      |      |      |      |      |      |      |      |
| A5   | 0.65  | 0.52  | 0.48  | 0.55  | 1.00  |      |      |      |      |      |      |      |      |      |
| B1   | -0.03 | 0.00  | 0.03  | -0.04 | -0.02 | 1.00 |      |      |      |      |      |      |      |      |
| B2   | -0.01 | -0.07 | -0.04 | -0.04 | -0.01 | 0.51 | 1.00 |      |      |      |      |      |      |      |
| B3   | 0.03  | -0.01 | -0.01 | -0.01 | -0.01 | 0.63 | 0.55 | 1.00 |      |      |      |      |      |      |
| B4   | -0.05 | -0.09 | -0.06 | -0.05 | -0.03 | 0.57 | 0.59 | 0.48 | 1.00 |      |      |      |      |      |
| WTP1 | 0.18  | 0.12  | 0.10  | 0.14  | 0.15  | 0.16 | 0.14 | 0.19 | 0.14 | 1.00 |      |      |      |      |
| WTP2 | 0.19  | 0.14  | 0.12  | 0.17  | 0.18  | 0.15 | 0.11 | 0.22 | 0.13 | 0.74 | 1.00 |      |      |      |
| WTP3 | 0.16  | 0.10  | 0.13  | 0.14  | 0.15  | 0.17 | 0.10 | 0.18 | 0.10 | 0.73 | 0.72 | 1.00 |      |      |
| WTP4 | 0.19  | 0.10  | 0.09  | 0.14  | 0.16  | 0.16 | 0.14 | 0.18 | 0.16 | 0.94 | 0.71 | 0.71 | 1.00 |      |
| WTP5 | 0.15  | 0.10  | 0.09  | 0.12  | 0.12  | 0.18 | 0.12 | 0.17 | 0.11 | 0.74 | 0.73 | 0.75 | 0.71 | 1.00 |

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO)=0.819, Bartlett's Test of Sphericity=3625.790, p=0.000

**2. Confirmatory Factor Analysis Results**

**2.1. Push Factors Analysis**

The second-order confirmatory factor analysis for push factors indicated that the model fitted the data extremely well ( $\chi^2/df=1.119$ ; CFI=0.996; GFI=0.940; AGFI=0.927, RMSEA=0.017). All goodness-of-fit indices met or exceeded acceptable benchmarks, providing justification that the model was well-specified for measuring push factors as shown in Table 2

Table 2. Goodness-of-Fit Indices for the Confirmatory Factor Analysis Model of Community-Based Health Tourism Motivation Main Components (Push Factors)

| Statistical Test    | Assessment Criteria                             | Calculated Value | Assessment Result |
|---------------------|---|------------------|-------------------|
| X <sup>2</sup>      | Not statistically significant at the 0.05 level | 400.760          | -                 |
| df                  | -   | 358              | -                 |
| p-value             | p > 0.05  | 0.059            | Meets criteria    |
| X <sup>2</sup> / df | < 2   | 1.119            | Meets criteria    |
| CFI                 | >0.95   | 0.996            | Meets criteria    |
| GFI                 | >0.95   | 0.940            | Meets criteria    |
| AGFI                | >0.90   | 0.927            | Meets criteria    |
| RMSEA               | <0.05   | 0.017            | Meets criteria    |

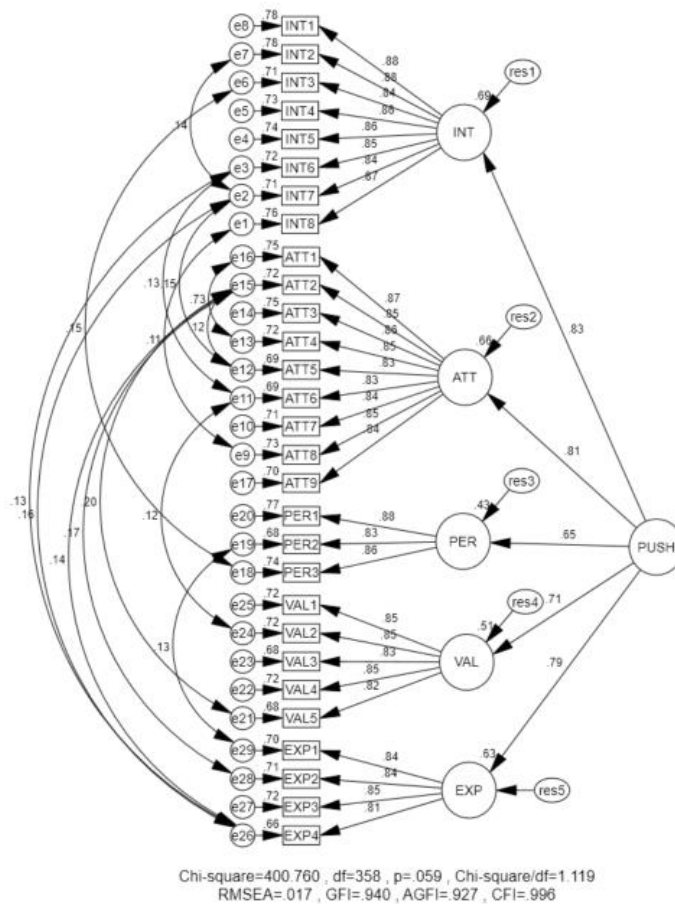


Figure 3. Second-order s for Push Factors

The factor loading suggests Internal Needs (INT) in the paramount component ( $\lambda=0.83$ ), Attitude toward Health Tourism (ATT) in the second ( $\lambda=0.81$ ), Tourism Experience (EXP) in the third ( $\lambda=0.79$ ), Health Tourism Values (VAL) in the fourth ( $\lambda=0.71$ ), and Information Perception (PER) in the fifth ( $\lambda=0.65$ ). Composite reliability was determined to be 0.87, with Average Variance Extracted reaching above 0.58, confirming the reliability and validity of the construct as presented in Table 3.

Table 3. Summary of Confirmatory Factor Analysis of Community-Based Health Tourism Motivation Components (Push Factors)

| Community-Based Health Tourism Motivation Components (Push Factors) | Sub-components | Factor Loading | Importance Ranking | CR   | AVE  |
|---|----------------|----------------|--------------------|------|------|
| Push  | INT            | 0.83           | 1                  | 0.87 | 0.58 |
|   | ATT            | 0.81           | 2                  |      |      |
|   | PER            | 0.65           | 5                  |      |      |
|   | VAL            | 0.71           | 4                  |      |      |
|   | EXP            | 0.79           | 3                  |      |      |

**2.2. Pull Factors Analysis**

The second-order confirmatory factor analysis for pull factors demonstrated a good model fit ( $\chi^2/df=1.166$ , CFI=0.996, GFI=0.958, AGFI=0.944, RMSEA=0.020) according to acceptable values. All goodness-of-fit indices met or exceeded acceptable benchmarks, confirming that the hierarchical model was well-specified for measuring pull factors as shown in Table 4. The first aspect was Destination Image (IMG,  $\lambda=0.80$ ), followed by Health Activities (HAC,  $\lambda=0.78$ ). Value for Money and Tourism Information were next (VFM and INF, both  $\lambda=0.76$ ).

Table 4. Goodness-of-Fit Indices Confirmatory Factor Analysis Model of Pull Factors Main Components

| Statistical Test    | Assessment Criteria                             | Calculated Value | Assessment Result |
|---------------------|---|------------------|-------------------|
| X <sup>2</sup>      | Not statistically significant at the 0.05 level | 181.955          | -                 |
| df                  | -   | 156              | -                 |
| p-value             | p > 0.05  | 0.076            | Meets criteria    |
| X <sup>2</sup> / df | < 2   | 1.166            | Meets criteria    |
| CFI                 | >0.95   | 0.996            | Meets criteria    |
| GFI                 | >0.95   | 0.958            | Meets criteria    |
| AGFI                | >0.90   | 0.944            | Meets criteria    |
| RMSEA               | <0.05   | 0.020            | Meets criteria    |

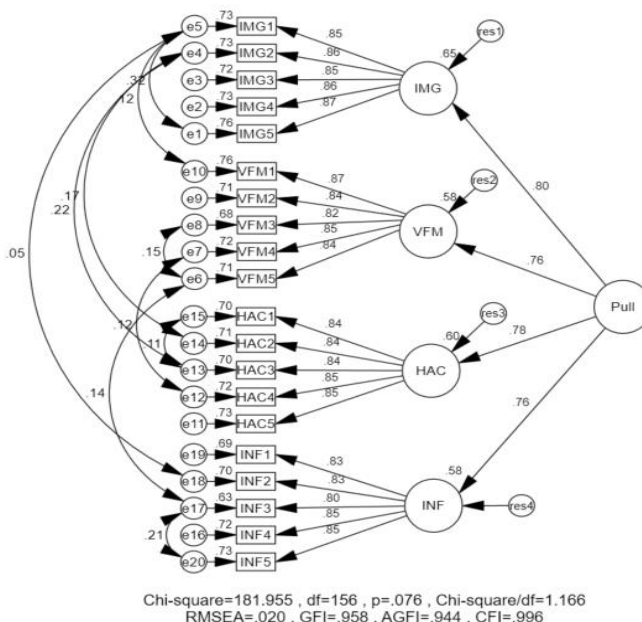


Figure 4. Second-order for Pull Factors

The pull factors construct achieved composite reliability of 0.86 and Average Variance Extracted of 0.60, demonstrating satisfactory reliability and convergent validity as presented in Table 5.

Table 5. Summary of Confirmatory Factor Analysis of Pull Factors Main Components

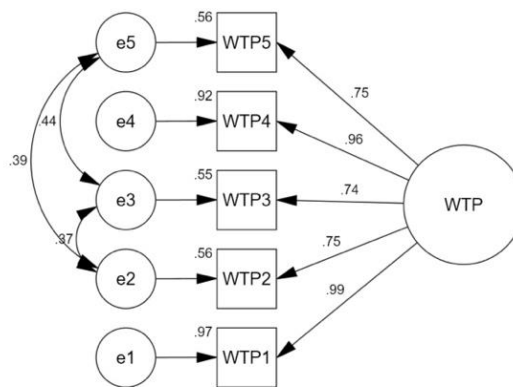
| Pull Factors Components | Sub-components | Factor Loading | Importance Ranking | CR   | AVE  |
|-------------------------|----------------|----------------|--------------------|------|------|
| Pull                    | IMG            | 0.80           | 1                  | 0.86 | 0.60 |
|                         | VFM            | 0.76           | 3                  |      |      |
|                         | HAC            | 0.78           | 2                  |      |      |
|                         | INF            | 0.76           | 3                  |      |      |

### 2.3. Willingness to Pay Analysis

Unlike the hierarchical structure employed for push and pull factors, a first-order CFA was deemed appropriate for the willingness to pay construct. The first-order confirmatory factor analysis for Willingness to Pay showed excellent fit for the model ( $\chi^2/df=0.062$ , CFI=1.000, GFI=1.000, AGFI=0.999, RMSEA=0.000) as shown in Table 6. This modeling decision reflects the unidimensional nature of WTP, where all five indicators directly measure a single latent construct—tourists' monetary valuation of community-based health tourism. The theoretical framework does not propose subdimensions of WTP that would justify a second-order structure; rather, all items assess the same underlying willingness to pay across different service aspects (quality, uniqueness, safety, community support, and wellness restoration). The factor loadings ranged from 0.74 to 0.99, with WTP3 having the lowest loading (0.74) and WTP5 the highest (0.99).

Table 6. Goodness-of-Fit Indices for the Confirmatory Factor Analysis Model of Willingness to Pay (WTP) Main Component

| Statistical Test    | Assessment Criteria                             | Calculated Value | Assessment Result |
|---------------------|---|------------------|-------------------|
| X <sup>2</sup>      | Not statistically significant at the 0.05 level | 0.124            | -                 |
| df                  | -   | 2                | -                 |
| p-value             | p > 0.05  | 0.940            | Meets criteria    |
| X <sup>2</sup> / df | < 2   | 0.062            | Meets criteria    |
| CFI                 | >0.95   | 1.000            | Meets criteria    |
| GFI                 | >0.95   | 1.000            | Meets criteria    |
| AGFI                | >0.90   | 0.999            | Meets criteria    |
| RMSEA               | <0.05   | 0.000            | Meets criteria    |



Chi-square= 124 , df=2 , p=.940 , Chi-square/df=.062  
 RMSEA=.000 , GFI=1.000 , AGFI=.999 , CFI=1.000

Figure 5. CFA Results for WTP

Composite reliability reached 0.92 with an Average Variance Extracted of 0.71, confirming excellent internal consistency and convergent validity for the willingness to pay construct as presented in Table 7

Table 7. Summary of First-Order Confirmatory Factor Analysis of Willingness to Pay (WTP) Main Component

| Main Component Willingness to Pay (WTP) | Sub-components | Factor Loading | CR   | AVE  |
|---|----------------|----------------|------|------|
| WTP                                     | WTP1           | 0.75           | 0.92 | 0.71 |
|   | WTP2           | 0.96           |      |      |
|   | WTP3           | 0.74           |      |      |
|   | WTP4           | 0.75           |      |      |
|   | WTP5           | 0.99           |      |      |

3. Structural Equation Modeling Results

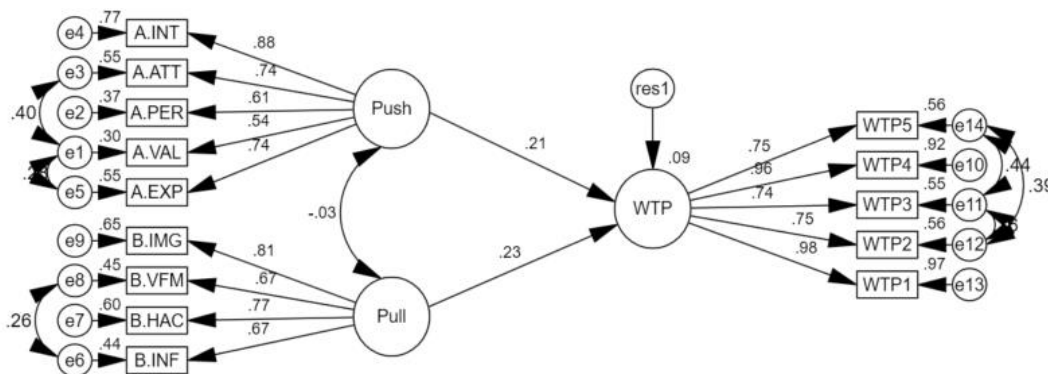
3.1 Overall Model Fit

The proposed structural model showed a good fit to empirical data ( $\chi^2/df=1.185$ , CFI=0.996, GFI=0.973, AGFI=0.959, RMSEA=0.021) as shown in Table 8. The fit indices presented values above recommended thresholds, suggesting the structural relationships were suitable.

Table 8. Goodness-of-Fit Indices for Causal Relationship Model

| Statistical Test    | Assessment Criteria                             | Calculated Value | Assessment Result |
|---------------------|---|------------------|-------------------|
| X <sup>2</sup>      | Not statistically significant at the 0.05 level | 80.561           | -                 |
| df                  | -   | 68               | -                 |
| p-value             | p > 0.05  | 0.142            | Meets criteria    |
| X <sup>2</sup> / df | < 2   | 1.185            | Meets criteria    |
| CFI                 | >0.95   | 0.996            | Meets criteria    |
| GFI                 | >0.95   | 0.973            | Meets criteria    |
| AGFI                | >0.90   | 0.959            | Meets criteria    |
| RMSEA               | <0.05   | 0.021            | Meets criteria    |

3.2 Hypothesis Testing Results



Chi-square=80.561 , df=68 , p=.142 , Chi-square/df=1.185  
 RMSEA=.021 , GFI=.973 , AGFI=.959 , CFI=.996

Figure 6. Second-order structural equation model

The results of structural path analysis indicated evidence of a significant and positive relationship for both hypothesized models. For Hypothesis 1, push factors were a significant predictor of willingness to pay ( $\beta=0.21$ ,  $t=3.97$ ,  $p<0.01$ ). For Hypothesis 2, pull factors were an even stronger predictor of willingness to pay ( $\beta=0.23$ ,  $t=4.24$ ,  $p<0.01$ ) as presented in Table 9.

Table 9. Variable Influences According to Research Hypotheses

| Variables   | WTP            |              |      |      |        |
|---|----------------|--------------|------|------|--------|
|   | Unstandardized | Standardized | S.E. | t    | p      |
| Push  | 0.26           | 0.21         | 0.07 | 3.97 | 0.00** |
| Pull  | 0.32           | 0.23         | 0.08 | 4.24 | 0.00** |
| X <sup>2</sup> =80.561, df=68, p=0.142, X <sup>2</sup> /df=1.185, GFI=0.973, AGFI=0.959, CFI=0.996, RMSEA=0.021 |                |              |      |      |        |

The structural model explained 42% of the variance in willingness to pay ( $R^2=0.42$ ), indicating substantial explanatory power. Effect sizes for both push ( $\beta=0.21$ ) and pull factors ( $\beta=0.23$ ) fell within small to medium ranges according to Cohen's (1988) criteria as summarized in Table 10.

Table 10. Summary of Research Hypothesis Testing Results

| Research Hypotheses  | Hypothesis Testing Results |
|--|----------------------------|
| Hypothesis 1: Push factors have a positive influence on Willingness to Pay (WTP) | Hypothesis accepted        |
| Hypothesis 2: Pull factors have a positive influence on Willingness to Pay (WTP) | Hypothesis accepted        |

## DISCUSSION

This research effectively merged the push-pull theory with a willingness-to-pay framework in a community-based health tourism context, utilizing Mae Tom Sub District as the point of inquiry. Both push factors ( $\beta=0.21$ ) and pull factors ( $\beta=0.23$ ) were statistically impactful on tourists' willingness to pay, with pull factors resulting in a slightly higher beta value. Internal needs captured push factors, while destination image captured pull factors, demonstrating the dual importance of motivations focused on personal wellness and personal credibility in the destination.

This study expands the tourism theory transformation of prior literature that suggests motivation frameworks are relevant to specialized communities within health tourism contexts, while also displaying support for community-based health tourism as a sustainable and economically viable development model. In pursuit of sustainable tourism development, stakeholders should seek to consciously develop credibility in the destination while addressing the tourists' internal need for wellness for the purposes of maximizing the visitors' satisfaction experience and ultimately greater economic benefit for the local community. Theoretical frameworks in and of themselves provide valuable practical guidance in tourism development tactics for sustainably designing tourism strategies that provide some benefit for both tourists and the host community in southern Thailand, and points beyond the region at large.

## CONCLUSION

### 1. Theoretical Contributions and Key Findings

The current investigation successfully merged push-pull theory with willingness to pay frameworks in a community-based health tourism context, using Mae Tom Subdistrict, Thailand, as a case study. The hierarchical factor structure provided superior modeling capabilities compared with simple models that assumed independence among motivational dimensions. The second-order factors explained over 42% of the variance in willingness to pay, demonstrating significant predictive performance for theoretical purposes, specifically in community health tourism settings.

Pull factors offered a more substantial influence on willingness to pay (standardized  $\beta=0.23$ ) than push factors (standardized  $\beta=0.21$ ), which runs counter to the normative tourism patterns of push factors influencing domestic decisions (Bayih & Singh, 2020). This shift in relative strength suggests that community health tourism occurs in a separate decision-making process, with the influence of the nature of the community and attributes of the destination over personal motivations. The strength of the representation of destination image ( $\lambda=0.80$ ) is similar to Dodds' (2013) research on destination credibility. However, it extends this beyond simple environmental concerns into cultural authenticity perceptions of community tourism in the Thai context. The multidimensional willingness to pay construct extends established economic paradigms by including dimensions of social responsibility.

This includes the contingent valuation techniques of Loomis et al. (2000), which are coupled with community development dimensions that encapsulate the values of contemporary tourists towards responsible tourism practices. It supports the idea that motivation theories can anticipate economic behaviors on specialized tourism contexts; a significant finding that also progresses the original work of Dann (1977) beyond behavioral intentions to actual payment decisions.

Health tourism attitudes were the second-ranked push factor ( $\lambda=0.81$ ), indicating a greater appreciation among tourists for local health wisdom within the context of the Mae Tom Subdistrict.

In the medical tourism studies, it was common for the tourists to seek high-quality medical treatment at a lower price, which is different from the wellness sector (John & Larke, 2016). The results indicate an emerging preference among tourists for authentic, embedded health experiences within communities in Southern Thailand.

Finally, the position of constructs within a hierarchy revealed patterns in health tourism motivation related to community-based health tourism. The hierarchy of pull factors exhibited the highest priority as destination image ( $\lambda=0.80$ ), followed by health activity ( $\lambda=0.78$ ), while value for money and tourism information factors were equal in importance

( $\lambda=0.76$ ). However, this does not follow conventional tourism research findings, which suggests tourists had other value considerations, centered on authenticity and credibility, rather than simply price optimization.

Tourism managers should aim to develop authentic stories to develop destination image with a focus on naturalness, safety, and cultural heritage. Marketing communications should focus on community-based health tourism as a means to address self-care needs, rather than promoting wellness experiences in a non-specific manner. The fact that the destination image factor had influenced ( $\lambda=0.80$ ) suggests investment in credibility-building is more valuable than purely promotional activity.

Community tourism operators in Mae Tom Subdistrict and similar contexts should develop health activities that combine traditional knowledge with meeting modern wellness tourism expectations. Training and alignment for local practitioners should take into account both the authenticity of traditional practices, while ensuring that the quality of the service aligns with tourists' expectations of wellness experiences.

The health activities factor was significant ( $\lambda=0.78$ ), indicating that tourists derive value from preserving traditional practices and appreciating professional service delivery. Tourism planners should consider that tourists are willing to pay higher prices to support personal wellness and community development. The five WTP dimensions: price for quality health activities, for unique experiences, for safe services, for supporting the community, and for restoring health provide direction for pricing strategies that consider multidimensional value rather than competing on price alone.

Destination management organizations should commit resources to investing in infrastructure and building a system of certification to create destination credibility. Because the destination image is critically important in the Southern Thailand context, marketing campaigns should focus on marketing safety, environmental quality, and cultural authenticity by evidencing verified community participation in tourism development. There are several limitations in the generalizability of these results. Data was collected explicitly in Songkhla Province, which may not serve as a reliable proxy for other parts of the country or internationally. Southern Thailand's unique Thai-Malay cultural blend gives rise to specific conditions that may not apply to different cultural settings. Additionally, the cross-sectional design of the study prevents us from inferring causal inferences, despite the structural equation modeling approach exhibited in the data analysis.

The study specifically examined intentions rather than actual payment behavior. Future research would be extremely helpful in validating this concept via revealed preferences, observing actual behaviors of tourists in community-based health tourism contexts. The inclusion of sample criteria requiring health tourism interest may have erroneously overshot the strength of the relationships compared to a generalized tourist population, with the potential to create a selection bias effect.

The case study method using Mae Tom Subdistrict provides valuable insights, specifically, with limited broader generalizability. While the community exemplifies the characteristics of community-based health tourism, it cannot be assumed that the results would have the same meaning or utility to communities relying on different resource bases, cultural contexts, or degrees of development.

Future research could test this specific theoretical framework cross-culturally to discover whether a similar pull factor dominance occurs in other community-based health tourism contexts. Furthermore, future investigations could integrate pro-environmental behavioral dimensions into the push-pull willingness to pay framework, drawing on recent empirical work by Pinthong et al. (2024), who demonstrated that visitors' pro-environmental behaviors at urban forest destinations are shaped by a complex interplay of motivational, normative, and contextual factors analogous to those identified in the present study. Longitudinal studies could explore how these constructs and tourist motivations change over time as markets mature and destination communities develop. Future studies should also look specifically for actual behaviors using revealed preference methods to examine community-based health tourism as a function of willingness to pay.

Validation studies could also diverge in each tourism block used, and examine whether the hierarchical factor structure holds in each Asian context, or if the factor must be modified in a Western health tourism market. There is also the potential to explore further community participation impacts on tourist perception, willingness to pay, and sustainable development in the context of community-based health tourism.

The framework from the research could also be extended to explore seasonal variations, segments of tourists, and the sustainability of long-term community outcomes as an impact of health tourism.

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