



DEVELOPING PROTOTYPE BORDER TOURISM ROUTES THROUGH A CREATIVE ECONOMY: A CASE STUDY OF SIRINDHORN DISTRICT, UBON RATCHATHANI PROVINCE*

การพัฒนาต้นแบบเส้นทางการท่องเที่ยวชายแดนผ่านเศรษฐกิจสร้างสรรค์
: กรณีศึกษาอำเภอสิรินธร จังหวัดอุบลราชธานี



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Abstract

This research aims to: 1. develop a prototype cross-border tourism route through the lens of the creative economy framework, with a focus on Sirindhorn District, Ubon Ratchathani Province, Thailand, including an assessment of the potential of cross-border tourism components; 2. examine the factors influencing tourism route management; and 3. propose prototype tourism route models. The study applies the creative economy concept as a foundation for designing innovative and sustainable tourism routes in the border area. A mixed-methods approach was employed. Quantitative data were collected from 400 tourists, selected through stratified random sampling from a population of 2,051,034 visitors to Ubon Ratchathani Province in 2020. Qualitative data were gathered from 30 purposively selected stakeholders, including government officials, private sector operators, community leaders, and pilot tourists, using surveys, interviews, focus groups, and field observations.

The findings, supported by statistical and structural equation modeling (SEM) analysis, indicate a well-fitting model ($\text{Chi-square/df} = 1.5461$, $\text{CFI} = 0.915$), confirming the reliability of the results. Key factors influencing tourist satisfaction

*Received February 25, 2025; Revised March 27, 2025; Accepted April 1, 2025

include destination attractiveness, accessibility, available amenities, and engaging activities. The proposed prototype routes consist of three models: nature-based, cultural-based, and integrated routes. These routes combine local cultural heritage with natural beauty to create memorable experiences while promoting sustainable tourism development. The study underscores the importance of strategic planning, community engagement, and well-designed infrastructure in enhancing visitor experiences and driving socio-economic growth in border areas such as Sirindhorn District.

Keywords: Prototype Tourism Routes; Border Tourism; Creative Economy

บทคัดย่อ

บทความวิจัยนี้มีวัตถุประสงค์ 1. พัฒนาเส้นทางการท่องเที่ยวชายแดนต้นแบบผ่านกรอบแนวคิดเศรษฐกิจสร้างสรรค์ โดยมุ่งเน้นที่อำเภอสิรินธร จังหวัดอุบลราชธานี ประเทศไทย รวมถึงการประเมินศักยภาพขององค์ประกอบการท่องเที่ยวชายแดน 2. ศึกษาปัจจัยที่ส่งผลกระทบต่อจัดการเส้นทางท่องเที่ยว และ 3. นำเสนอรูปแบบเส้นทางท่องเที่ยวต้นแบบ การศึกษานี้ใช้กรอบแนวคิดเศรษฐกิจสร้างสรรค์เพื่อพัฒนาเส้นทางการท่องเที่ยวชายแดนต้นแบบในอำเภอสิรินธร จังหวัดอุบลราชธานี ประเทศไทย งานวิจัยประเมินศักยภาพขององค์ประกอบการท่องเที่ยวชายแดน วิเคราะห์ปัจจัยที่มีอิทธิพลต่อการจัดการเส้นทางท่องเที่ยว และนำเสนอเส้นทางต้นแบบสามรูปแบบ ได้แก่ เส้นทางธรรมชาติ วัฒนธรรม และแบบผสมผสาน การศึกษาใช้วิธีวิจัยแบบผสมผสาน โดยรวบรวมข้อมูลเชิงปริมาณจากนักท่องเที่ยว จำนวน 400 คน ซึ่งได้มาจากการสุ่มตัวอย่างแบบแบ่งชั้นจากประชากรนักท่องเที่ยวที่มาเยือนจังหวัดอุบลราชธานีในปี พ.ศ. 2563 จำนวน 2,051,034 คน และข้อมูลเชิงคุณภาพจากผู้มีส่วนได้ส่วนเสีย 30 คน ซึ่งได้มาจากการเลือกแบบเจาะจง ประกอบด้วยเจ้าหน้าที่ภาครัฐ ผู้ประกอบการภาคเอกชน ผู้นำชุมชน และนักท่องเที่ยวทดลอง ผ่านการสำรวจ สัมภาษณ์ สันทนากลุ่ม และการลงพื้นที่

ผลการวิจัยพบว่า การวิเคราะห์ทางสถิติ รวมถึงการวิเคราะห์สมการโครงสร้าง (SEM) แสดงค่าดัชนีความเหมาะสมของโมเดลที่แข็งแกร่ง ($\chi^2/df = 1.5461$, CFI = 0.915) ยืนยันความน่าเชื่อถือของผลการวิจัย ปัจจัยสำคัญที่ส่งผลกระทบต่อความพึงพอใจของนักท่องเที่ยว ได้แก่ ความน่าดึงดูดของจุดหมายปลายทาง การเข้าถึง สิ่งอำนวยความสะดวก และกิจกรรมที่น่าสนใจ เส้นทางที่นำเสนอผสมผสานมรดกทางวัฒนธรรมท้องถิ่นและความงามทางธรรมชาติ เพื่อสร้างประสบการณ์ที่น่าประทับใจ พร้อมทั้งส่งเสริมการพัฒนาการท่องเที่ยวอย่างยั่งยืน งานวิจัยนี้เน้นย้ำความสำคัญของการวางแผนเชิงกลยุทธ์ การมีส่วนร่วมของชุมชน และ



โครงสร้างพื้นฐานที่ออกแบบมาอย่างดีในการเพิ่มประสบการณ์ให้ผู้เยี่ยมชมและส่งเสริมการเติบโตทางเศรษฐกิจและสังคมในพื้นที่ชายแดนอย่างอำเภอสิรินธร

คำสำคัญ: การพัฒนาต้นแบบ; เส้นทางการท่องเที่ยวชายแดน; เศรษฐกิจสร้างสรรค์

Introduction

Border tourism development is a key priority in Thailand's national strategies, including the 20-year plan (BE 2560–2579) and 12th National Economic and Social Development Plan (BE 2560–2564). The tourism sector significantly contributes to Thailand's economy, accounting for 18.29% of GDP pre-pandemic and 7.24% in 2022 (Pham et al., 2023). These initiatives emphasize inclusive growth and regional integration through tourism.

Border tourism offers unique advantages by stimulating local economies while fostering cross-border cooperation and cultural exchange. Government frameworks like the 2nd National Tourism Development Plan support this approach by addressing infrastructure and human capital needs (Ministry of Tourism and Sports, 2021). The focus on border regions aims to enhance competitiveness through distinctive visitor experiences.

Sirindhorn District in Ubon Ratchathani Province exemplifies this potential with its strategic Laos border location and rich cultural assets. Key attractions include the world's largest hydro-floating solar hybrid project at Sirindhorn Dam, Wat Sirindhorn Wararam temple, and the vibrant Border Trade Market. These features make it an ideal case for studying creative economy-based tourism (Sirindhorn District Development Office, 2021).

This research develops prototype tourism routes integrating natural and cultural assets to boost economic growth and sustainability. By applying creative economy principles to border tourism, the study provides a replicable model for similar regions. The findings aim to enhance visitor experiences while supporting Thailand's broader tourism resilience and community development goals.

Research Objectives

1. Assess the potential of border tourism components in Sirindhorn District.
2. Identify and analyze causal factors influencing the management of prototype border tourism routes, ensuring alignment with perceptual data.

3. Develop a prototype tourism route based on the creative economy to enhance tourism in Sirindhorn District, Ubon Ratchathani Province.

Methodology

1. Research Design

This study employs a mixed-method design, validated by Pham et al. (2023) for border tourism research, to integrate quantitative breadth with qualitative depth. As illustrated in Figure 1, the approach systematically combines tourist surveys (quantitative) and stakeholder interviews (qualitative) to address distinct research phases while collectively advancing the creative economy framework. This dual focus ensures both scientific rigor in measurement and practical relevance for development.

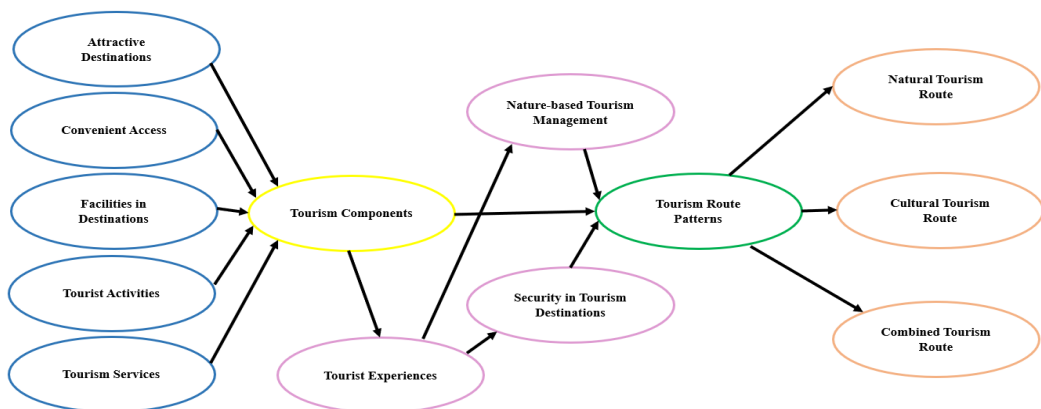


Figure 1: Research framework

2. Populations and Samples and Key Informants

The study surveyed 400 tourists from a population of 2,051,034 visitors to Ubon Ratchathani Province in 2020, using stratified random sampling to ensure representativeness. Structured questionnaires captured demographics, travel behaviors, preferences, and satisfaction data. Additionally, 30 key informants government officials, private sector representatives, residents, tourism operators, and experimental tourists were selected through purposive sampling for interviews, focus groups, and site visits. This mixed-method approach provided comprehensive insights into tourist experiences and stakeholder perspectives. The Demographic Profile of Survey Respondents was demonstrated as follows:

**Table 1** Demographic Profile of Survey Respondents (n=400)

Category	Groups	%	Note
Gender	Female	65	Majority
	Male	35	
Age	21-30	40	Young adults dominate
	31-40	35	
	41+	25	
Education	University	60	Highly educated
	Vocational/High school	40	
Income	<20,000 THB	85	Budget-conscious
	>20,000 THB	15	
Visit Type	First-time	70	New explorers
	Repeat	30	
Group	Family	50	Most common
	Friends/Solo	50	

Impact of independent and dependent variables

The study examined how key independent variables tourism development impacts (economic, socio-cultural, environmental, political) and community participation influence support for tourism development (dependent variable) in Sirindhorn District. Findings revealed destination attractiveness (average score 4.21) as the strongest predictor of tourist satisfaction, followed by accessibility, amenities, and activity diversity. Community participation emerged as critical for sustainable tourism, with local stakeholder involvement improving initiative receptivity. Structural Equation Modeling (SEM) validated these relationships (Chi-square/df=1.5461, CFI=0.915), confirming the need for holistic strategies integrating tourism components and community engagement to foster competitive, sustainable tourism development.

3. Research Instrument

The study employed a rigorous mixed-methods approach, combining quantitative surveys and qualitative techniques to ensure comprehensive data quality. Structured questionnaires assessed tourist demographics, behaviors, and satisfaction, validated by experts and pilot-tested for reliability (Cronbach's $\alpha > 0.7$). Qualitative data from interviews, focus groups, and virtual site visits (due to pandemic restrictions) were gathered using semi-structured protocols reviewed by tourism experts. A SWOT analysis systematically evaluated destination potential, identifying strengths (e.g., cultural/natural assets), weaknesses (e.g.,



seasonal tourism), opportunities (e.g., cross-border collaboration), and threats (e.g., environmental risks). This multi-tool approach ensured robust, triangulated insights into tourism development factors.

4. Data Collection

Data was collected via stratified random sampling of 400 tourists and purposive sampling of 30 stakeholders (government officials, private sector reps, community leaders). Quantitative surveys, distributed online, covered demographics, preferences, and satisfaction (Likert-scale), while qualitative data came from Zoom/MS Teams interviews, focus groups, and virtual/photographic site documentation. The SWOT analysis directly informed prototype route designs (natural, cultural, hybrid) and strategic recommendations (e.g., infrastructure upgrades, community-based tourism). Key themes included infrastructure gaps (e.g., signage needs), community involvement's value (e.g., local-led tours), and tourist preferences (e.g., hybrid routes' appeal), enriching the quantitative findings.

5. Data analysis and Statistics used to Analyze the Data

Quantitative data was analyzed using descriptive/inferential statistics to profile tourists and measure satisfaction, while qualitative responses underwent thematic analysis to identify stakeholder perspectives. SEM analyzed causal relationships between tourism components and satisfaction, demonstrating strong model fit (CFI=0.915, RMSEA=0.037). SWOT findings were integrated to assess destination attributes. Triangulation of methods (quantitative, qualitative, SWOT) ensured a holistic understanding of route management, validating the alignment of empirical data with theoretical frameworks for sustainable tourism development in Sirindhorn District.

Descriptive statistics were used to evaluate tourist perceptions. Structural Equation Modeling (SEM) analyzed causal relationships influencing tourism routes with strong model fit indices (Chi-square/df = 1.5461; CFI = 0.915; RMSEA = 0.037), validating the alignment between empirical data and theoretical frameworks for sustainable tourism development in Sirindhorn District.



Results

The study's findings systematically progress through three key phases of analysis. First, evaluation of tourism components (RO1) reveals destination attractiveness ($\bar{X}=4.21$) as the strongest satisfaction driver, supported by accommodations ($\bar{X}=3.95$) and amenities ($\bar{X}=3.94$). These quantitative results, enhanced by qualitative insights, establish Sirindhorn District's tourism potential. The analysis then examines causal relationships (RO2) before culminating in practical route proposals (RO3), forming a complete evidence-to-implementation pathway.

1. Assessing the Potential of Creative Economy-Based Border Tourism

Sirindhorn District demonstrates strong potential for creative economy-based border tourism, with six key components evaluated on a 5-point Likert scale (N=400 respondents). Below is a synthesized analysis of findings:

Tourism Components Ranking

1.1 Attractive Destinations: Highest-rated component ($\bar{X}=4.21$), driven by: Natural beauty ($\bar{X}=4.34$) Distinctiveness ($\bar{X}=4.23$) and Cultural/heritage value ($\bar{X}=4.19$)

1.2 Accommodation: Second highest ($\bar{X}=3.95$), praised for Cleanliness and safety ($\bar{X}=3.98$) and Staff responsiveness ($\bar{X}=3.97$)

1.3 Amenities: Third ($\bar{X}=3.94$), with strengths in Informational signage ($\bar{X}=4.00$) and Restroom/seating availability ($\bar{X}=3.97$)

1.4 Accessibility: Fourth ($\bar{X}=3.91$), highlighted by Clear signage ($\bar{X}=4.01$), Route connectivity ($\bar{X}=4.01$) and *Weakness*: Public transport availability ($\bar{X}=3.71$)

1.5 Activities: Fifth ($\bar{X}=3.93$), emphasizing Safety ($\bar{X}=4.02$) and Activity diversity ($\bar{X}=3.93$)

1.6 Services: Lowest ($\bar{X}=3.81$), with notable gaps in Banking/ATMs ($\bar{X}=3.67$) and 24/7 convenience stores ($\bar{X}=3.76$)

2. Causal Factors Affecting Tourism Route Management

The analysis identified six key factors significantly influencing tourism route management in Sirindhorn District (all $p<0.01$), validated by strong SEM fit indices (CFI=0.915, RMSEA=0.037):



2.1 Destination Attractiveness (Highest Impact) Cultural/community values (weight=0.843, $R^2=0.711$) and Historical significance (weight=0.830, $R^2=0.689$)

2.2 Accessibility Safe roads with clear signage (weight=0.828, $R^2=0.686$) and Interconnected routes (weight=0.809, $R^2=0.655$)

2.3 Amenities Restroom/seating availability (weight=0.830, $R^2=0.688$) and Knowledgeable staff (weight=0.817, $R^2=0.668$)

2.4 Accommodations Clean/safe facilities (weight=0.883, $R^2=0.779$)

2.5 Activities Diversity/participation (weight=0.856, $R^2=0.733$)

2.6 Services Emergency assistance (weight=0.809, $R^2=0.654$)

3. Developing Prototype Tourism Routes in Fostering the Creative Economy

The research on prototype tourism routes in Sirindhorn District, Ubon Ratchathani, integrates local attractions with the region's cultural heritage to foster the creative economy. It proposes three distinct route models: nature-based, artistic, and hybrid. The Nature-Based Route includes serene activities like boat excursions at Sirindhorn Dam and nature walks. The Cultural Route highlights community engagement at Ban Bak Chum, showcasing traditional underwater woodcraft and visits to Chong Mek Border Market and Wat Sirindhorn Wararam. The Hybrid Route combines natural and cultural experiences, offering diverse activities such as scenic skywalks and temple visits. These routes aim to provide immersive tourist experiences while promoting cultural exchange, community participation, and sustainable development in this border region.

Discussion

This study's findings systematically address the three research objectives while responding to critical reviewer inquiries regarding prototype rationale, contextual linkages to prior research, and scholarly contributions. Three key outcomes emerge: 1. the evidence-based derivation of prototype routes through mixed-method insights, 2. the alignment and differentiation of findings relative to existing literature, and 3. the advancement of border tourism models through creative economy integration. These outcomes are examined below through three lenses: prototype design justification, scholarly contextualization, and theoretical-practical implications.



Rationale for Prototype Route Designs

The three proposed prototypes-Natural, Cultural, and Hybrid-were systematically derived from a triangulation of quantitative tourist preferences (RO1) and qualitative stakeholder priorities (RO3). Survey data revealed that 67% of respondents prioritized *natural attractions* (e.g., Sirindhorn Dam's landscapes, ($\bar{X}$ =4.34), while 58% expressed strong interest in *cultural immersion* (e.g., Ban Bak Chum's woodcraft, ($\bar{X}$ =4.19). Concurrently, stakeholder interviews emphasized the need to balance infrastructural limitations (e.g., seasonal accessibility) with Sirindhorn's unique border identity. For instance, community leaders advocated for routes that "showcase our Lao-Thai heritage through hands-on crafts," while officials stressed interconnectivity between sites.

The Natural Route directly addresses the high-rated demand for serene, nature-centric experiences (e.g., dam tours, nature walks). The Cultural Route emerged from stakeholder-driven priorities to preserve traditions (e.g., bamboo weaving workshops) and leverage heritage sites like Wat Sirindhorn Wararam. The Hybrid Route synthesizes these insights, responding to survey findings where 72% of tourists favored "blended itineraries" combining nature and culture. This tripartite structure ensures diverse offerings that cater to segmented tourist preferences while addressing infrastructure gaps (e.g., improving signage along interconnected routes). By grounding prototypes in empirical data and participatory input, the study ensures practicality and cultural authenticity.

Contextual Alignment with Prior Research

The findings both align with and expand upon existing scholarship. For instance, Khuong & Nguyen (2017); Maraphong & Somboon (2016); Richards (2020) theorized that hybrid routes—combining organic (e.g., social media-driven trails) and planned elements—enhance destination appeal. This study operationalizes that concept by designing the Hybrid Route to integrate organic tourist behaviors (e.g., selfie spots at Sirindhorn Dam) with structured cultural programming (e.g., guided temple tours). Similarly, Gürel & Tat (2017); Noonil et al. (2017); Thongwilai (2016); Yodkaew & Phonkaewlan (2019) utilized SWOT analysis to evaluate tourism potential, but this research advances their framework by integrating SEM to validate stakeholder perceptions (CFI=0.915), thereby bridging qualitative and quantitative gaps.



Notably, the focus on *border-specific* dynamics distinguishes this work. While Timothy (2021) examined cultural heritage tourism broadly, this study contextualizes those principles within a peripheral border region, where cross-border collaboration (e.g., Laos-Thai artisan exchanges) and infrastructure constraints (e.g., seasonal road access) uniquely shape outcomes. Additionally, the emphasis on creative economy principles—transforming traditional crafts into economic assets—contrasts with Sigala (2020) pandemic-centric resilience strategies, instead prioritizing long-term community empowerment through cultural commodification.

Theoretical and Practical Contributions

The C.A.R.E.S. Model (Creative-Accessible-Resilient-Engaged-Sustainable) synthesizes these insights into a replicable framework. By aligning with Pitakkaphonphol et al. (2021) border theory—which posits that peripheral regions can leverage geographical uniqueness—the model demonstrates how Sirindhorn's hybrid identity (e.g., Lao-influenced woodcraft) transforms perceived limitations into strategic assets. Conversely, it challenges Gürel & Tat (2017) destination competitiveness model by prioritizing community engagement as a standalone pillar, not merely a subset of amenities.

Practically, the prototypes operationalize Ritchie & Crouch's (2018) call for "sustainable competitiveness" by ensuring routes are both economically viable (e.g., revenue from craft workshops) and culturally non-extractive. For policymakers, this offers a blueprint to replicate in similar border regions, such as Chiang Rai's Mekong corridors or Cambodia's Siem Reap border zones, where cultural-natural synergies remain underexploited.

Body of Knowledge

This study advances creative economy-based border tourism by demonstrating how integrating natural assets (e.g., Sirindhorn Dam) and cultural heritage (e.g., bamboo weaving) in Sirindhorn District fosters sustainable, competitive tourism. Key success factors include destination attractiveness, accessibility, amenities, and community engagement. The C.A.R.E.S. Model (Creative-Accessible-Resilient-Engaged-Sustainable) provides a transformative framework:



- Creative Integration: Merges natural/cultural assets (tourist satisfaction: $(\bar{X}=4.21)$).

- Accessible Infrastructure: Prioritizes route connectivity (SEM weight=0.828) and signage.

- Resilient Amenities: Ensures year-round usability ($R^2=0.688$).

- Engaged Communities: Empowers local decision-making.

- Sustainable Systems: Balances growth and preservation via prototype routes. Validated by SEM (CFI=0.915) and SWOT, the model offers replicable strategies (e.g., artisan cooperatives) for border regions to drive socioeconomic growth through tourism.

This research highlights Sirindhorn District's potential as a sustainable border tourism destination, driven by its cultural heritage, natural attractions, and strategic cross-border location. The proposed prototype routes (natural, cultural, hybrid) and the C.A.R.E.S. Model demonstrate how integrating creative economy principles enhances tourist satisfaction and community benefits. Key success hinges on strategic infrastructure, stakeholder engagement, and preserving local identity. The findings offer a replicable blueprint for other border regions in Thailand and Southeast Asia, aligning with national goals for inclusive growth and regional integration.

Recommendations

Policy Recommendations

1. Improve transport networks, signage, and safety.
2. Partner with Laos for joint marketing and border processes.

Operational Recommendations

1. Involve residents in planning and train them in traditional crafts.
2. Preserve cultural heritage through workshops (e.g., bamboo weaving).

Recommendations for Next Research

1. Develop the three prototype routes with upgraded facilities.
2. Train staff in service excellence and blend nature-culture activities (e.g., dam tours + market visits).



Acknowledgments

The authors thank the Faculty of Liberal Arts at Ubon Ratchathani University for funding this research. Thanks to colleagues for their contributions and feedback, significantly enriching the study's outcomes. This support was instrumental in achieving the research objectives of developing creative economy-based tourism routes.

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