

กลยุทธ์การจัดการอย่างยั่งยืนเพื่อการอนุรักษ์มรดกทางสถาปัตยกรรมพื้นถิ่นของกลุ่มชาติพันธุ์ลีในมณฑลไหหลำ

Sustainable Management Strategies for the Conservation of Vernacular Architecture Heritage of the Li Ethnic Group

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บทคัดย่อ

การศึกษานี้มีวัตถุประสงค์เพื่อ 1) เพื่อศึกษาคุณค่าและสถานการณ์ของมรดกสถาปัตยกรรมพื้นถิ่นของกลุ่มชาติพันธุ์ลีในมณฑลไหหลำ 2) เพื่อวิเคราะห์ปัจจัยและปัญหาที่มีอิทธิพลต่อการจัดการและการอนุรักษ์มรดกดังกล่าว และ 3) เพื่อพัฒนาแบบจำลองการจัดการอย่างยั่งยืนสำหรับมรดกสถาปัตยกรรมพื้นถิ่น โดยใช้ระเบียบวิธีวิจัยแบบผสมผสานประกอบด้วยการสัมภาษณ์เชิงลึกผู้เชี่ยวชาญจำนวน 10 คน และการเก็บข้อมูลด้วยแบบสอบถามจากกลุ่มตัวอย่างจำนวน 150 คน แบ่งเป็นประชาชนในพื้นที่และนักท่องเที่ยวอย่างละ 75 คน วิเคราะห์ข้อมูลเชิงคุณภาพด้วยการวิเคราะห์เชิงเนื้อหาและการจัดกลุ่มประเด็น และวิเคราะห์ข้อมูลเชิงปริมาณด้วยสถิติเชิงพรรณนา ผลการวิจัยเชิงปริมาณพบว่า กลุ่มตัวอย่างมีการรับรู้คุณค่ามรดกในระดับสูง โดยมีค่าเฉลี่ยด้านคุณค่าทางวัฒนธรรม ($\bar{X}=4.45$) และด้านการท่องเที่ยว ($\bar{X}=4.32$) ขณะที่ความตระหนักด้านการอนุรักษ์อยู่ในระดับปานกลางถึงสูง ($\bar{X}=3.85$) นอกจากนี้ ผลกระทบจากการท่องเที่ยวพบว่าด้านเศรษฐกิจมีค่าเฉลี่ยสูง ($\bar{X}=4.40$) แต่ด้านวัฒนธรรมและสิ่งแวดล้อมอยู่ในระดับปานกลาง ($\bar{X}=3.60$) และ ($\bar{X}=3.75$) ตามลำดับ ด้านผลการวิจัยเชิงคุณภาพพบประเด็นสำคัญ ได้แก่ การขาดระบบการบริหารจัดการแบบบูรณาการ การอนุรักษ์ที่เน้นเพียงรูปแบบภายนอกส่งผลให้ความแท้ลดลง การขาดระบบบำรุงรักษา การสูญเสียทักษะช่างพื้นถิ่น และแรงกดดันจากการท่องเที่ยว จากการบูรณาการผลการวิจัย พบช่องว่างด้านการจัดการและนำไปสู่การพัฒนาแบบจำลองการจัดการอย่างยั่งยืนที่ประกอบด้วยปัจจัยนำเข้า กระบวนการ และผลลัพธ์ เพื่อสนับสนุน

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Abstract

This study aims to: 1) examine the values and conditions of vernacular architectural heritage of the Li ethnic group in Hainan Province; 2) analyze the key factors and challenges influencing its management and conservation; and 3) develop a sustainable management model for vernacular architectural heritage. A mixed-methods approach was employed, combining in-depth interviews with 10 experts and questionnaire surveys administered to 150 respondents, consisting of 75 residents and 75 tourists. Qualitative data were analyzed using content and thematic analyses, while quantitative data were examined through descriptive statistics. Quantitative findings indicate a high level of heritage value perception, with scores for cultural value ($\bar{X}=4.45$) and for tourism value ($\bar{X}=4.32$). Conservation awareness remains at a moderate to high level ($\bar{X}=3.85$). Impacts of tourism show high economic benefits ($\bar{X}=4.40$), while cultural and environmental impacts are moderate ($\bar{X}=3.60$ and $\bar{X}=3.75$). Qualitative findings reveal an absence of integrated management systems, surface-level conservation efforts that compromise authenticity, a lack of maintenance systems, the loss of traditional skills, and tourism pressure. The integration of the findings highlights a gap in management systems that leads to the development of a sustainable management model consisting of inputs, processes, and outputs that support long-term conservation and authenticity preservation.

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Therefore, recommendations include establishing integrated management systems, enhancing participation, and controlling tourism impacts.

Keywords: sustainable management strategies, conservation, vernacular architectural heritage, Li ethnic group, Hainan Province

Introduction

Vernacular architectural heritage represents a fundamental component of cultural identity and community continuity, embodying local wisdom, environmental adaptation, and socio-cultural values accumulated over generations. Such heritage is not only expressed through physical structures but also through intangible dimensions, including traditional knowledge, craftsmanship, and community practices (UNESCO, 2013, pp. 24–35), the conservation of cultural heritage requires an integrated approach that recognizes both tangible and intangible attributes in order to sustain authenticity and cultural significance.

In the context of globalization and rapid economic transformation, vernacular architectural heritage is increasingly exposed to multiple pressures. The expansion of tourism, urbanization, and modernization has led to significant changes in traditional built environments. While tourism can generate economic benefits and enhance visibility, it often results in commodification and staged representations of culture, ultimately undermining authenticity (Timothy & Boyd, 2003, pp. 126–135). At the same time, the replacement of traditional materials and construction techniques with modern alternatives contributes to the erosion of local identity and the gradual disappearance of indigenous knowledge systems.

The Li ethnic group in Hainan Province provides a significant case for examining these challenges. Their vernacular architectural heritage reflects a close relationship between human settlements, natural environments, and cultural traditions. However, recent development policies and tourism-oriented strategies have altered traditional settlement patterns and architectural forms. Furthermore, the decline in traditional craftsmanship and the lack of systematic knowledge transmission have intensified the vulnerability of this heritage.

A critical issue underlying these challenges is the absence of effective governance and integrated management systems. Heritage conservation is often fragmented across multiple agencies, leading to inconsistencies in policy implementation and limited coordination among stakeholders. (Pendlebury, 2013, pp. 711–715), conservation practices are deeply influenced by governance structures and institutional frameworks, while (Pierre & Peters, 2000, pp. 50–65) emphasize that fragmented governance reduces policy effectiveness and adaptive capacity.

Given these conditions, it is essential to develop sustainable management strategies that integrate conservation principles, stakeholder participation, and systematic governance mechanisms. Sustainable heritage management should not only focus on

physical preservation but also ensure the continuity of cultural values, community engagement, and adaptive management processes.

Therefore, this study aims to examine the values and current conditions of vernacular architectural heritage of the Li ethnic group in Hainan Province, analyze the key factors influencing its management and conservation, and develop a sustainable management model. By integrating qualitative and quantitative approaches, this research seeks to provide both theoretical and practical contributions to the field of heritage management, particularly in the context of ethnic cultural heritage and tourism development.

Research Objectives

1. To Study and analyze the vernacular architectural heritage of the Li ethnic group.
2. To Synthesize the conservation of vernacular architectural heritage of the Li ethnic group in Hainan Province.
3. To Develop a sustainable management strategy model for the conservation of vernacular architectural heritage of the Li ethnic group in Hainan Province.

Research Hypothesis

1. Attribute-based documentation improves credibility of conservation decisions. If authenticity is assessed through attribute-level evidence and credible information sources, then conservation and reuse decisions for Li vernacular heritage will have higher transparency and defensibility than decisions based on aesthetic preference or tourism demand alone
2. Public reuse strategies are feasible when they respect distinguishability and avoid falsification. In public reuse contexts, adaptive reuse interventions are more likely to be accepted as conservation-compatible when new additions remain distinguishable and do not falsify historical evidence.
3. Multi-stakeholder participation mechanisms strengthen sustainable management performance. When management arrangements include meaningful 6 participation and capacity mechanisms for residents, practitioners, and operators, sustainable management performance in tourism-based heritage settings is more likely to stabilize through maintenance organization, skill transmission, and benefit sharing.

Literature Review

1. Contemporary Art Field

The contemporary art field is shaped by interactions among artists, institutions, and audiences within a global cultural system. It reflects dynamic power relations and institutional influence over artistic production and dissemination. (Bourdieu, 1993, pp. 72-89), the field of cultural production operates as a structured space where cultural value is negotiated through social and symbolic capital. This highlights the importance of institutional frameworks in shaping contemporary art practices.

2. Management Model

Management models in the cultural sector emphasize coordination, strategic planning, and stakeholder engagement to ensure sustainability. Governance-based approaches underline the need for institutional integration and policy alignment (Pierre & Peters, 2000, pp. 50-65). Additionally, effective management requires adaptive systems capable of responding to complex cultural environments (Kaplan & Norton, 2004, pp. 10-25).

3. International Cross-Cultural Exchange

Cross-cultural exchange enhances mutual understanding and fosters collaboration across diverse cultural contexts. It supports knowledge transfer and innovation but also introduces challenges related to cultural imbalance. (UNESCO, 2013, pp. 24-35) emphasizes that successful cultural exchange depends on inclusive participation and structured management frameworks. (Hall, 1997, pp. 225-240) highlights the role of cultural identity in shaping intercultural communication.

4. Art Exhibition

Art exhibitions function as platforms for cultural representation and audience engagement, where curatorial practices shape interpretation and meaning. Effective exhibition management integrates planning, communication, and audience experience (Timothy & Boyd, 2003, pp. 120-125). Furthermore, exhibition-making is increasingly viewed as a cultural production process influenced by institutional and social contexts (Ferguson, Greenberg, & Nairne, 1996, pp. 1-15).

5. Research Gap

Although prior studies address contemporary art, management, and cross-cultural exchange, most focus on isolated dimensions. There is a lack of integrated frameworks that connect governance, exhibition practices, and cross-cultural dynamics within a unified management model. Therefore, this study addresses this gap by

proposing a comprehensive model that enhances sustainability and effectiveness in contemporary art field management.

Methodology

This study employed a mixed method research design combining qualitative and quantitative approaches to obtain comprehensive findings related to the conservation and management of vernacular architectural heritage of the Li ethnic group in Hainan Province.

For the qualitative approach, data were collected through in depth interviews with 10 experts in heritage conservation, cultural management, tourism, and local cultural studies using purposive sampling. The interview questions were developed based on the research objectives and related literature. The qualitative data were analyzed using thematic analysis to identify major themes, management issues, and conservation challenges.

For the quantitative approach, data were collected from 150 respondents through questionnaires, consisting of 75 local residents and 75 tourists. The questionnaire was developed from literature review and validated by experts using the Index of Item Objective Congruence (IOC). Reliability testing was conducted using Cronbach’s Alpha to ensure internal consistency. The quantitative data were analyzed using descriptive statistics, including frequency, percentage, mean, and standard deviation, to examine perceptions regarding heritage value, tourism impacts, and management factors. The integration of qualitative and quantitative findings enhanced the reliability and validity of the study.

Respondent Profile

A total of 150 valid questionnaires were collected, consisting of 75 local residents and 75 tourists. The balanced structure of the sample allows for a comparative understanding between internal (community-based) and external (tourism-based) perceptions regarding vernacular architectural heritage.

Table 1: Distribution of Respondents (n=150)

Respondent Group	Frequency	Percentage
Local residents	75	50
Tourists / visitors	75	50
Total	150	100

The equal distribution of respondents ensures analytical reliability by capturing both stakeholder groups who directly influence conservation outcomes. This dual perspective is essential for examining governance complexity and tourism impact.

Table 2: Perception of Heritage Value

Dimension	Mean Score	Interpretaion
Cultural value	4.45	Very high
Tourism value	4.32	High
Conservations awareness	3.85	Moderate high

The results indicate a strong recognition of heritage value among respondents. However, conservation awareness remains comparatively lower, revealing a gap between value recognition and management capacity. This discrepancy suggests that while heritage is appreciated, effective conservation practices are not fully institutionalized.

Table 3: Coding and Thematic Analysis

Code	Theme	Description
A1	Authenticity risk	Loss of original cultural and architectural value
G1	Governance fragmentation	Lack of coordination among institutions
M1	Maintenance weakness	Absence of systematic maintenance
T1	Tourism pressure	Impact of tourism development
S1	Skill loss	Decline in traditional craftsmanship

Qualitative Analysis Interview Findings

Semi-structured interviews with key informants were analyzed using thematic analysis. The findings reveal critical structural and governance-related challenges in heritage conservation.

Table 4: Synthesized Key Issues from Interviews

Issue	Description	Impact
Weak governance system	Lack of integrated management	Inefficient coordination
Superficial conservation	Focus on visual restoration	Loss of authenticity
Tourism-driven transformation	Economic prioritization	Cultural commodification

The qualitative findings demonstrate that conservation challenges extend beyond physical deterioration. Instead, they are deeply embedded in governance structures and institutional fragmentation. This supports the argument that conservation is fundamentally a management issue rather than a purely technical problem.

Table 5: Perceived Impacts of Tourism

Dimension	Mean Score
Economic impact	4.40
Cultural impact	3.60
Environmental impact	3.75

Tourism has a dual role in heritage conservation, providing economic benefits while posing risks to cultural authenticity and environmental sustainability, highlighting the need for balanced management strategies.

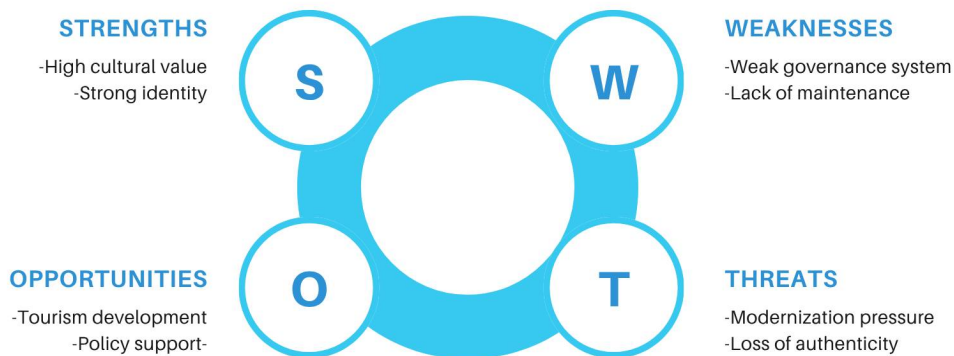


Figure 1: SWOT Analysis of Heritage Conservation

Source: Author

Table 6: Key Factors for Sustainable Management

Factor	Role
Governance system	Core mechanism
Stakeholder participation	Driving force
Monitoring system	Control mechanism
Authenticity protection	Primary objective

Model Explanation

Core components include heritage value, stakeholders, and tourism pressure shaping the conservation context. Key mechanisms such as governance, participation, and monitoring ensure coordination and adaptability. These lead to a sustainable management strategy that balances conservation and development, achieving long term conservation and authenticity preservation.

Factors for developing a sustainable management strategy model

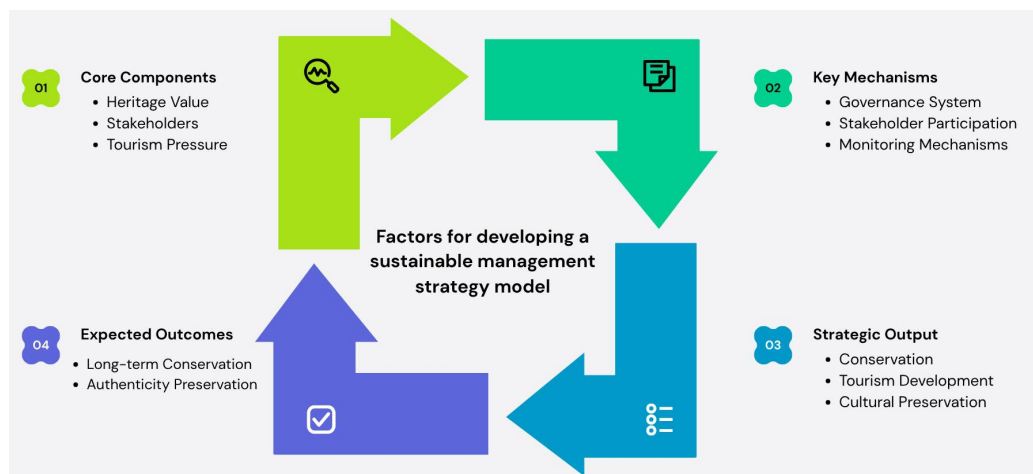


Figure 2: Factors for developing a sustainable management strategy model

Source: Author

The model shows a causal relationship between inputs, processes, and outcomes in heritage management. Heritage value, stakeholders, and tourism pressure shape the context, while governance systems, participation, and monitoring act as key mediators. Their integration produces a sustainable strategy that balances conservation and development, ensuring long-term preservation and authenticity.

Research results

The research findings revealed that respondents demonstrated a high level of recognition regarding the value of vernacular architectural heritage of the Li ethnic group in Hainan Province. The mean score for cultural value was ($\bar{X}=4.45$), while tourism value scored ($\bar{X}=4.32$), reflecting the important role of vernacular architectural heritage in preserving cultural identity and supporting tourism development. However, the findings

also indicated that modernization and tourism expansion increasingly threaten authenticity and traditional architectural characteristics. In addition, governance systems, stakeholder participation, and tourism pressure were identified as the major factors influencing heritage management and conservation. Weak institutional coordination, fragmented governance structures, and limited monitoring systems reduced management effectiveness. Although tourism generated significant economic benefits, with a mean score of ($\bar{X}=4.40$), it also created risks related to cultural commodification and authenticity loss. Based on these findings, the study developed a sustainable management model consisting of Heritage Value, Stakeholders, and Tourism Pressure as input factors, integrated through Governance Systems, Stakeholder Participation, and Monitoring Mechanisms. These processes contribute to the development of a Sustainable Management Strategy that supports Long term Conservation and Authenticity Preservation of the vernacular architectural heritage of the Li ethnic group in Hainan Province.

Discussions & Conclusion

Findings indicate that the conservation of vernacular architectural heritage is primarily a governance and management issue rather than a purely technical concern. Although respondents showed a high level of awareness regarding cultural and tourism values, significant gaps remain in management capacity, institutional coordination, and stakeholder integration. The study also found that tourism plays a dual role. While it generates economic benefits and increases cultural visibility, unmanaged tourism contributes to authenticity loss, cultural commodification, and environmental pressure. These findings reflect the complexity of balancing conservation and development within heritage contexts.

The study concludes that sustainable conservation requires an integrated management approach combining governance systems, stakeholder participation, and monitoring mechanisms. Such an approach enhances coordination, supports adaptive management, and strengthens long term conservation outcomes while preserving the authenticity of the Li ethnic group's vernacular architectural heritage in Hainan Province.

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