



Community Empowerment: A New Approach for the Sustainable Maintenance and Management of Chinese Historical Dwellings

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Received: 12 September 2024; Revised: 15 December 2024; Accepted: 20 December 2024; Available Online: 25 December 2024

Abstract

This research focuses on the Jianchuan Ancient City Historical and Cultural District. The aim of the study is to investigate and analyze the effective behaviors and implementation limitations of residents in the self-management and maintenance of historical dwellings. It also explores how the self-management and maintenance of historical dwellings benefit residents and the role these benefits play in the sustainable maintenance and management of historical dwellings. The development level of community empowerment practices in the area, along with the degree of community empowerment, are analyzed in this study, and suggestions are proposed for coping with limitations based on relevant successful cases to promote a sound community empowerment mechanism for the management and protection of historical dwellings. The study revealed that residents' long-term proactive maintenance behavior significantly extended the lifespan of historical dwellings and maintained the city's historical pattern. The need to repair wooden buildings has stimulated the development of local employment and traditional crafts. Residents were also found to play an important role in cultural dissemination and heritage research, establishing a preliminary collaborative relationship with the government, achieving a decentralization and proactive response, indicating the gradual development of the local community empowerment mechanism to a higher level, and demonstrating greater potential. The study findings also revealed the limitations of residents in terms of insufficient professional knowledge, financial constraints, and differences in investment within the community, posing potential challenges to improving community empowerment mechanisms and achieving the sustainable maintenance and management of historical residents. This study proposes the establishment of an architectural heritage to protect funds and organize professional training and lectures while providing historical dwelling archives and repair guidelines to ensure the autonomy, effectiveness, and sustainability of residents' participation in the maintenance and management of historical dwellings.

Keywords: Community Empowerment, Historical Dwellings, Sustainable, Self-management and Maintenance Behavior, Community Empowerment Mechanism

Introduction

In the Chinese context, historical dwellings, as cultural heritage, not only carry rich historical information but are also closely linked to the lives of local residents. For a long time, the protection of historical dwellings has often relied on the leadership of the government and experts, but this top-down protection model has encountered many problems in its actual operation, such as funding shortages, lack of technology, and differences in investment within the community.

In recent years, community empowerment to conserve strategies has gradually attracted attention in the field of cultural heritage. This strategy advocates incorporating community members into the maintenance and management process of cultural heritage to improve its efficiency and sustainability. This participatory community empowerment approach has been proven to effectively promote community participation and the sustainable management of cultural heritage (Chambers, 1997; Kyriakidis, 2019). It emphasizes the value of local knowledge and integrates it into the framework of cultural heritage management to ensure that heritage protection measures are consistent with the actual needs of the community (Cleaver, 1999). Through empowerment, communities can better control and manage their cultural resources, thereby ensuring their sustainability (Waterton & Smith, 2010), allowing



cultural heritage management practices to transcend from a single, state-led framework to a more inclusive and diversified conservation strategy (Hodder, 2010).

Community empowerment is not a new concept in the Chinese context. It has been widely used in many fields. Figure 1 shows the search results from the China National Knowledge Infrastructure (CNKI) database under the theme of “community empowerment”. In China’s poverty alleviation and rural revitalization policies, community empowerment is regarded as an important means to improve grassroots governance capabilities and promote sustainable development in rural areas. In the process of urbanization, community empowerment is used to promote grassroots autonomy and solve urban governance problems. In environmental governance, community empowerment is an important way of achieving public participation. In the field of social governance, community empowerment helps to resolve grassroots social conflicts and enhance social cohesion. However, in the field of cultural heritage, community empowerment is more focused on intangible cultural heritage, while practices and research related to built heritage are still in a relatively early stage (Figure 2).

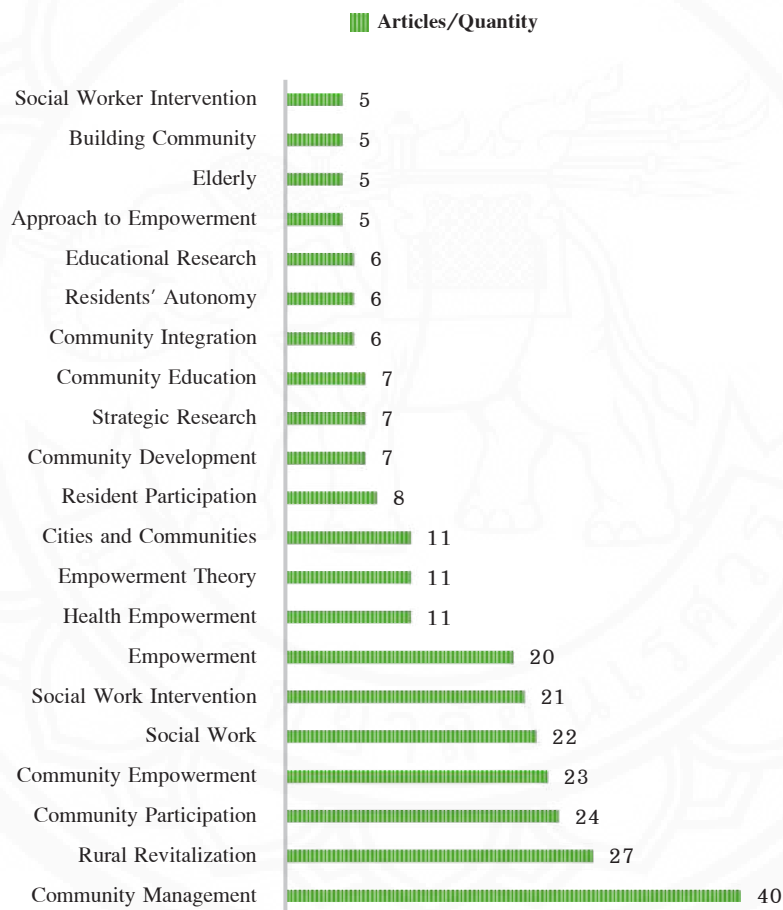


Figure 1 Search results for “Community Empowerment”.

(From 2000 to 2024, a total of 365 articles, and topics with more than five articles were counted)

Source: China National Knowledge Infrastructure www.cnki.net

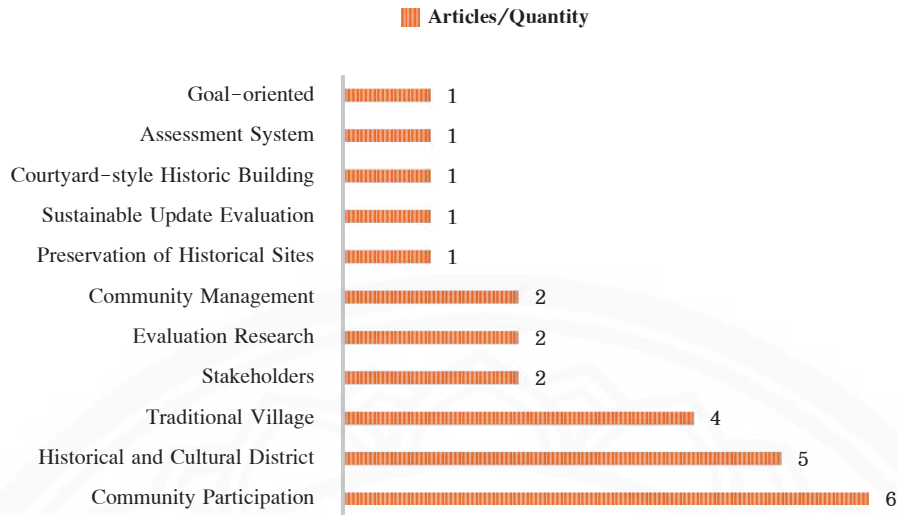


Figure 2 Search results under the theme of “Community Empowerment” and “Built Heritage” on “Cultural Heritage”.

(From 2000 to 2024, a total of 26 articles)

Source: China National Knowledge Infrastructure www.cnki.net

Although the importance of community empowerment in sustainable management is widely recognized, there are still significant gaps in relevant research in the field of Chinese cultural heritage. Existing research focuses more on policy design and theoretical frameworks while paying insufficient attention to specific behaviors or measures of community empowerment in the maintenance and management of historical dwellings, and their benefits. Another important gap is the limited research on the evaluation system of empowerment and its effects, resulting in the inability to accurately measure the actual impact of the empowerment process on residents’ participation to protect the quality of economic and social benefits for the community.

Research Objectives

1. To investigate and analyze the effective behaviors and implementation limitations involved in the self-management and maintenance of historical dwellings by local residents.
2. To explore the benefits to residents from the self-management and maintenance of historical dwellings and the role of these benefits in the sustainable maintenance and management of historical dwellings.
3. To evaluate the development level of community empowerment practices in the area, analyze the degree of community empowerment, and propose suggestions for coping with limitations based on relevant successful cases.
4. Based on first-hand data and local social and cultural background, to promote the establishment of a sound community empowerment mechanism suitable for the sustainable maintenance and management of local historical dwellings.

Research Benefits

The Jianchuan Ancient City Historical and Cultural District is situated in Jinhua Town, Jianchuan County, Dali Bai Autonomous Prefecture, Yunnan Province, China. The local architectural heritage management designed to protect authorities and residents initially developed an empowerment consciousness, but the empowerment mechanism remains in the process of exploration. By investigating and analyzing the self-management and maintenance behaviors and their effects on residents in historical dwellings along with the degree of development of the local community empowerment mechanism, unfavorable factors, shortcomings, and areas where there may



be room for improvement identified in the current mechanism. This study is expected to promote the improvement of the community empowerment mechanism for the management and protection of local historical dwellings, provide a reference for local governments and relevant institutions in the formulation of policies on the protection of historical dwellings, and further enhance the autonomy and effectiveness of residents' participation in the protection of historical dwellings.

Methods and Materials

Literature Review

Empowerment theory can be traced back to liberation psychology in the 1960s, which emphasized the need to change oppressive social structures (Freire, 1970). The concept of conscientization proposed by Freire suggests that people need to be aware of their position in social structures and the actions they can take to change the status quo (Freire, 2021). This process of conscientization provides an important cognitive foundation for empowerment because it encourages individuals and groups to identify and question existing power relations (Freire, 1970). Empowerment is not only a process but also an outcome. When individuals or groups gain control, they can produce positive personal and social changes (Perkins & Zimmerman, 1995).

Community empowerment is seen as a sustainable maintenance and management approach that increases the capacity, resources, and participation of community members, enabling them to effectively control and influence the development of community affairs (Zimmerman, 1995). This empowerment process usually involves promoting personal capacity building, community solidarity, and the provision of structural support to help the community transform from a passive recipient to an active participant (Rappaport, 1987). Community empowerment is a dynamic process requiring continuous community participation, external support, and the coordination of the policy environment (Mayo & Craig, 1995).

The community empowerment mechanism refers to a series of strategies and processes for enhancing the control of community members over resources, decision-making, and actions, enabling them to participate more actively in community affairs and achieve individual and collective goals (Zimmerman, 1995). This mechanism plays an important role in promoting cultural protection, enhancing community identity, and achieving sustainable development in the field of cultural heritage (Loulanski, 2006; Ostrom, 1990). By giving community members management rights, these mechanisms can enhance their participation in cultural heritage to help them become the core force in cultural heritage protection and utilization (Smith, 2006).

Self-management and maintenance behavior drive the community empowerment mechanism toward achieving its goals. This behavior effectively promotes the operation and sustainability of the empowerment mechanism by enhancing the endogenous strength and initiative of the community (Zimmerman, 1995), providing the necessary stability and support for the empowerment mechanism, and strengthening its effectiveness (Putnam et al., 1994). When community members actively participate in maintenance behavior, they not only consolidate their sense of responsibility for community affairs but also enhance internal cohesion and social capital through cooperation (Laverack & Wallerstein, 2001). In the protection of architectural heritage, the maintenance behavior organized by the community ensures the long-term preservation of cultural assets and creates a good foundation for the subsequent implementation of the empowerment mechanism (Mason & de la Torre, 2002). The feedback effect of self-management and maintenance behavior injects vitality into the empowerment mechanism, transforming it



from external promotion to endogenous drive, thereby enhancing its sustainability and far-reaching impact (Mayo & Craig, 1995).

A Theoretical Model for Assessing Community Empowerment

In Sherry Arnstein's classic article "A Ladder of Citizen Participation" (1969), the community empowerment level is divided into eight stages, the lowest being "non-participation" and the highest "citizen control", demonstrating that the power and responsibility of the community are enhanced through the ladder to achieve the ultimate goal of empowerment. This division vividly depicts the levels and depth involved, providing a clear theoretical model for evaluating the degree of community empowerment (Arnstein, 1969) (Table 5). However, Arnstein's model has certain limitations. For example, it ignores the differences in cultural and social backgrounds, overemphasizes the distribution of rights, and simplifies the complexity of participation. It also focuses on the current state of participation and ignores the time dimension of participation in that some accumulation in the past may potentially affect the continuous effects of the present and future. Despite these limitations, a comparative analysis of the Arnstein model with other similar models from four perspectives: theoretical, core characteristics, evaluation dimensions, and applicability in heritage protection, demonstrates that the linear process and step-by-step progressive characteristics of this model are suitable for evaluating the progress and degree of community empowerment implementation.

Table 1 Comparison of Theoretical Models to Assess the Degree of Community Empowerment

Model	Theoretical Basis	Core Features	Assessment Dimensions	Applicability in Heritage to Protect
Ladder of Citizen Participation	Power transfer and empowerment	Linear progression, step by step	Depth of power control	Promoting community empowerment in long-term projects such as architectural heritage management
Typology of Participation in Development Projects (Pretty, 1995)	Learning and social capital accumulation	Emphasizes cooperation and consensus, focuses on process	Resource utilization and social capital	Community craft enhancement programs, such as traditional craft training
Guide to Effective Participation (Wilcox, 1994)	Community empowerment and collaborative governance	Emphasize the dynamics and flexibility of participation	Optimize participation methods according to the needs of different projects	Adapting to the needs of different heritage protection projects

Measures to Address the Limitations of Residents' Self-management and Maintenance: Case Analysis

In China, insufficient funds, lack of technology, and information asymmetry are common problems faced by residents in the self-management and maintenance process of historical dwellings (Yongwei & Hongwei, 2020). In response to these challenges, the government and local organizations have taken a series of measures to improve the community empowerment mechanism. The following cases effectively address the limitations faced by residents in the process of self-management and maintenance and provide references for the improvement of community empowerment mechanisms. First, the establishment of an architectural heritage system to protect funds to provide financial support to residents in need is an important way of addressing economic limitations. In the Tulou Protection Project in Fujian Province, the local government provided subsidies to residents with financial difficulties through a special fund for the repair and maintenance of Tulou. This not only reduced the economic burden on



residents but also stimulated their enthusiasm for participating in protection work (Xueqin & Kai, 2022). Similarly, a special maintenance fund was established for the Ancient City of Lijiang in Yunnan Province to support residents in the independent repair of traditional dwellings. This initiative was combined with the tourism income distribution model to further increase the residents' economic resources (Gan & Ma, 2022). Second, organizing regular training and lectures to popularize knowledge and crafts to protect historical dwellings for residents is an effective way of improving technical capabilities. In the process of protecting Suzhou's classical gardens, the local government invited experts in cultural relic protection and architects to hold lectures and practical training for residents on a regular basis, teaching them about ancient building repair techniques, such as the repair of traditional wooden structures and the replacement of bricks and tiles. This approach effectively improved the residents' ability to protect their crafts and their technical knowledge level (Yeqin, 2018). Finally, the establishment of a systematic special archive and repair guide manual provided a scientific basis and norms for protection work. In the protection project of Wuzhen, Zhejiang, the local government conducted detailed mapping and recordings of traditional buildings and compiled a self-repair manual for residents, which not only provided technical guidance but also helped them better understand the value of cultural heritage, thereby enhancing their awareness toward the importance of protection (Lihong & Feng, 2005).

Research Methods

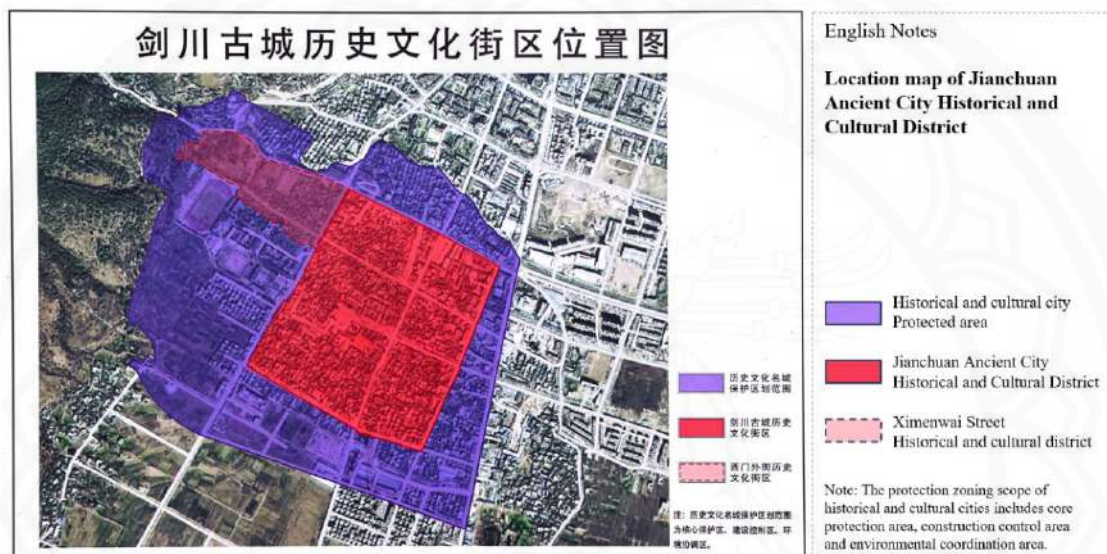
This study adopts qualitative research methods, including field investigation, observation, in-depth interviews, and a literature review.

Firstly, through field investigation, detailed data on 37 historical dwellings in the Jianchuan Ancient City Historical and Cultural District (Figure 3) were collected, including the internal and external preservation and maintenance status of the historical dwellings, status of the surrounding environment, and longitude and latitude coordinates. According to a government document released on the Chinese government website, Jianchuan County was officially listed as a National Historical and Cultural City on March 15, 2023 (The Central People's Government of the People's Republic of China, 2023). A National Historical and Cultural City is a title established by China to protect cities with historical and cultural value, referring to a city with a long history and profound cultural heritage. The historical and cultural heritage of these cities is not only of great significance to the region but also represents a certain value to the cultural development of the whole country and even mankind (The Central People's Government of the People's Republic of China, 2008).

Two groups of semi-structured, in-depth interviews were then conducted. The interview process followed ethical standards, and measures were implemented to obtain informed consent from participants and anonymize all data to protect the privacy of the interviewees. The first set of interviews involved the collection of data on the maintenance status of the wooden structures and components of historical dwellings, as well as the behaviors of different owners in the self-management and maintenance of historical dwellings. The interviewees consisted of seven owners of Ming Dynasty dwellings, two supervisors of Ming Dynasty dwellings, and 28 owners of dwellings from the Qing Dynasty to the Republic of China. The second set of interviews was conducted to review the field survey data, the first set of interview data, as well as local historical and government documents, and obtain feedback from experts and public officials. The interviewees comprised five researchers from the Jianchuan County Cultural Relics Bureau, two of whom focused on the study of Chinese wooden structures, while three focused on the maintenance and research of local architectural heritage. Three public officials from the Jianchuan County

Culture and Tourism Bureau, mainly responsible for the management, planning, and protection of the county's cultural heritage, were interviewed.

This study used thematic analysis to process the qualitative data. All interview records, observation notes, and documents were reviewed and coded to identify key themes. The researchers then analyzed and named these themes to explore the role of self-management and maintenance behavior in the sustainable protection and development of local historical dwellings. The literature review included relevant practices and research on community empowerment in the field of cultural heritage at home and abroad, the history of the formation and development of dwellings in the local and Bai cultural context, and the architectural forms, plan types, and compositional elements of local residential buildings.



Results

Data Analysis and Findings: Self-management and Maintaining Effective Behaviors and Limitations

This study combined field surveys and interviews to investigate the maintenance of wooden structures and components of 37 historical dwellings in the Jianchuan Ancient City Historical and Cultural District (Table 2 and Figure 4), as well as other effective behaviors (Figure 5) and limitations (Table 3) for the self-management and maintenance of historical dwellings. Local policy documents reveal nine national key protected sites in the district, all built in the Ming Dynasty. The remaining 28 are provincial, municipal, or county-level protected areas built between the Qing Dynasty and the Republic of China (Jianchuan County Culture and Tourism Bureau, 2021) (Figure 9).

The survey results show that all 37 historical dwellings are traditional Chinese wooden structures. Except for Zhaozhong Temple, Ximen Xiaoti Temple, and Cun's family residence, the remaining 34 are still inhabited. With the exception of Zhaozhong Temple, which was rebuilt as a whole, the main building structures of the 36 historical dwellings have not been replaced, demonstrating that the main structural design of the local residential buildings is scientific and the construction technology good (Figure 6). The more solid and less vulnerable components are



Yueliang, Lin, Chatou, Tuodun, Guazhu, Chuan, and Liangtuo. These components all enhance the stability of the main structure, are located inside the roof or wall, and are not easily affected by people's lives (Dougong is relatively rare in local historical dwellings). In contrast, the components often repaired or replaced are Chuanzi, Huaban, Queti, Menlou, Gezimen, and Chuang. Rafters consist of beam or roof support structures, mainly used to bear the weight of the roof and distribute it to the walls or other supporting structures. Roof tiles and loads such as ultraviolet rays, frost, and rain are the main reasons for the rafters requiring repair or replacement. Huaban, Queti, Menlou, Gezimen, and Chuang are located on the middle and lower floors of the house, come into frequent contact with people's lives and are easily damaged. However, they are small and easy to replace, and the cost of repair and replacement is inexpensive. They may also need to be replaced for aesthetic purposes, but such changes will not affect the building design.

Table 2 Repair and Replacement Records for the Wooden Frames and Components of Historic Dwellings

	No.	Name (Pinyin)	All Have Been Replaced	Parts Have Been Repaired or Replaced	Never Replaced	Never Repaired	Total Number of Samples
Wooden Building Structures	1	Lizhu	1	/	36	/	37
	2	Liangfang	1	/	36	/	37
Wooden Building Components	3	Yueliang	/	/	29	/	29
	4	Lin	/	26	11	/	37
	5	Chuanzi	23	14	/	/	37
	6	Chatou	/	17	20	/	37
	7	Tuodun	/	/	37	/	37
	8	Guazhu	/	/	37	/	37
	9	Chuan	/	/	37	/	37
	10	Huaban	5	16	10	/	31
	11	Queti	7	24	6	/	37
	12	Liangtuo	/	29	8	/	37
	13	Dougong	2	1	/	/	3
	14	Menlou	3	34	/	/	37
	15	Gezimen	17	20	/	/	37
	16	Chuang	19	18	/	/	37

Note: As there is no international consensus on the names of some components, this study uses pinyin combined with examples to avoid any misunderstanding.

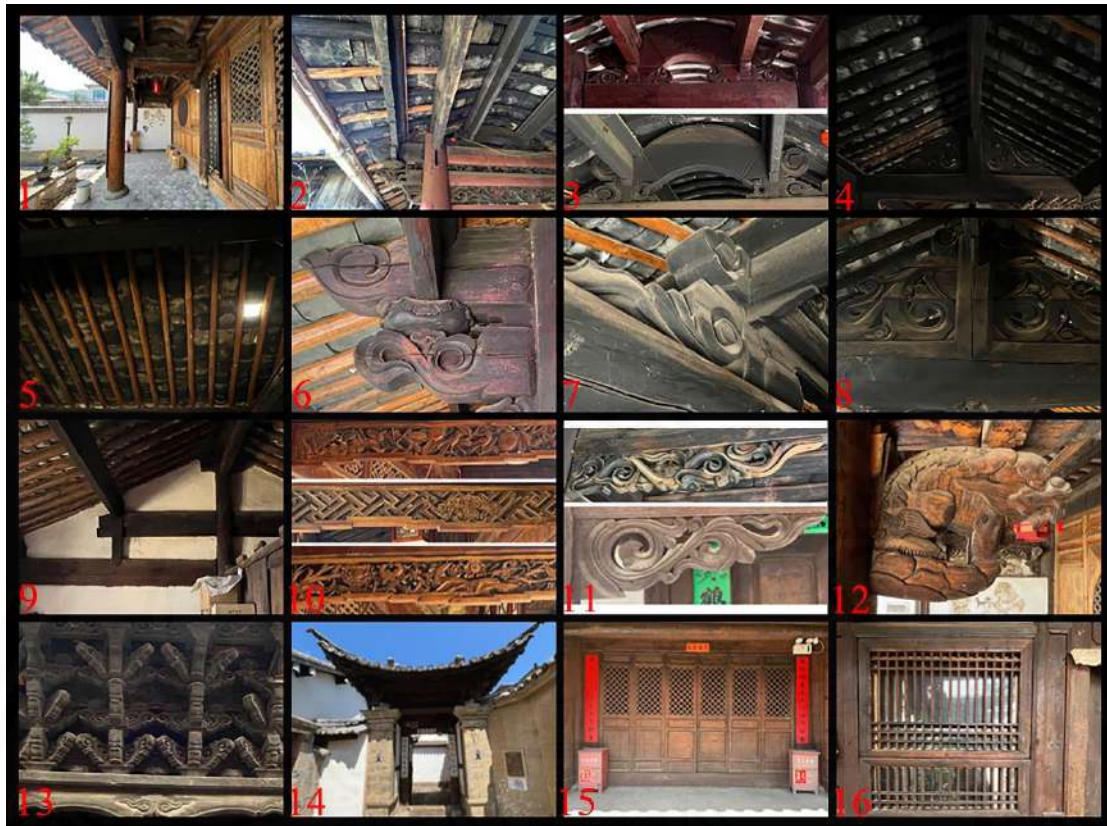


Figure 4 Examples of historical dwelling components.

Source: Photo taken by the author in 2023 and subsequently marked by the author.

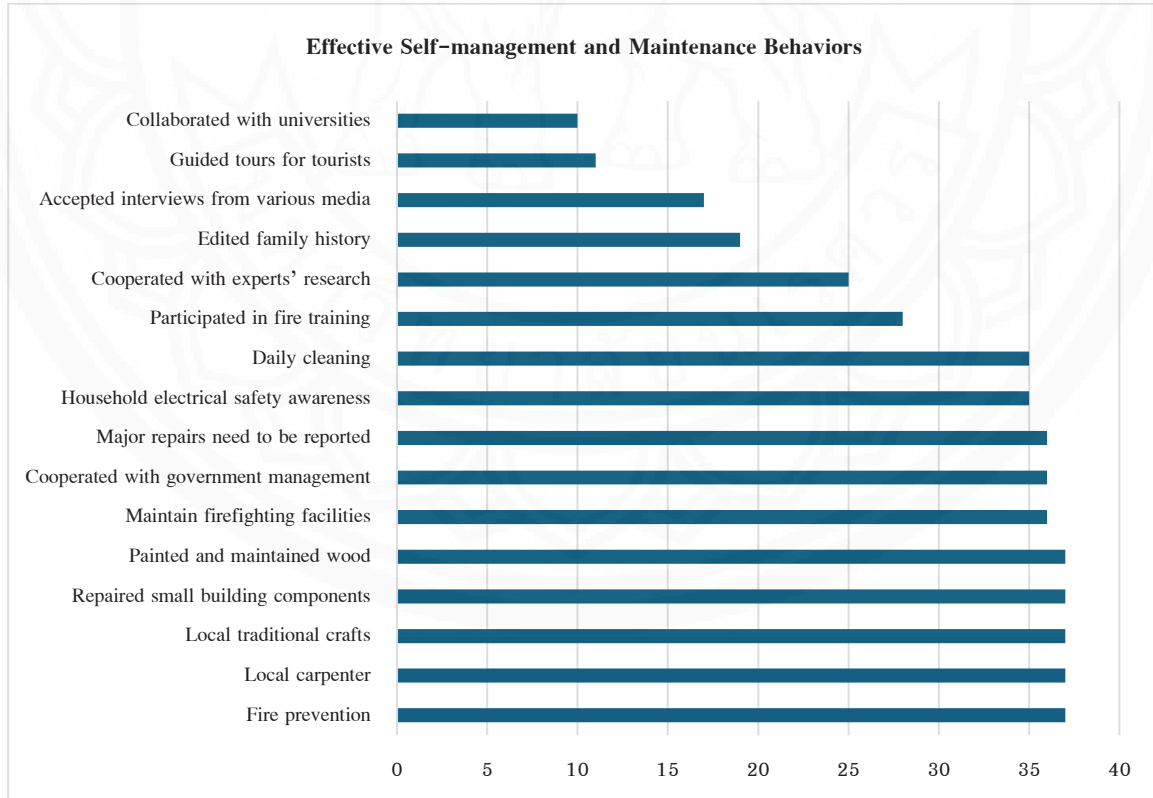


Figure 5 Keywords that appeared more than 10 times.

Source: The first set of interviews.

**Table 3** Limitations of Self-management and Maintenance

Limitations	Main Points and Findings	Examples and Explanations
Insufficient Technology and Knowledge	Most residents lack knowledge of repairs. Rely on friends, relatives, or uncertified craftsmen.	The improper operation of craftsmen has resulted in repeated repairs, roof leaks, and inconsistency with the overall building.
Economic Priority	More than 80% of the respondents prioritized using funds for basic living, with only a few willing to make additional investments to protect residential buildings.	Most residents mentioned: "The cost of repairs is too high, and we cannot afford them." "The price determines the quality of the repairs."
Differences in Investment within Communities	There is a significant gap in protection investment between households with different incomes.	High-income families value quality and aesthetics. Low-income families value practicality and affordability.

Source: The first set of interviews.

Thematic Analysis and Findings: The Benefits of Self-management and Maintenance

Table 4 Process and Presentation of Thematic Analysis

High-frequency Keywords	Theme Coding	Direct Benefits	Indirect Benefits
Daily Cleaning	Daily maintenance and repairs	Extend the lifespan of historical dwellings. Maintain the historical pattern of the city.	Gradually formed a spontaneous protection and inheritance mechanism. Gradually acquired a certain degree of resource control and independent decision-making ability.
Household Electrical			
Safety Awareness			
Painted and Maintained Wood			
Repaired Small Building Components			
Local Traditional Crafts	A Localized maintenance approach	Promote local employment.	During the organization and execution of the repair work, a cooperative relationship of resource sharing and equality was formed.
Local Carpenter		Maintain the authenticity of historical dwellings.	
Collaborated with Universities	Social participation and cooperation	Promote cultural dissemination. Promote heritage research.	Gradually promote the development of community empowerment mechanisms when participating in cooperative relationships. Gradually generate initiative and influence.
Guided Tours for Tourists			
Accepted Interviews from Various Media			
Edited Family History			
Cooperated with Experts' Research			
Major Repairs need to be Reported	Assisting in dwelling management and emergency response	Maintain and manage firefighting facilities. Reduce fiscal expenditure.	The partial decentralization of resources and management rights has been achieved. Government and communities are jointly involved in management responsibilities.
Cooperated with Government Management			
Maintained Firefighting Facilities			
Participated in Fire Training			
Fire Prevention			

Source: The second set of interviews.

Discussion

Daily Maintenance and Repairs

The survey results of the self-management and maintenance behavior toward historical dwellings show that daily small-scale repairs led by historical dwelling owners help to extend the lifespan of historical dwellings and maintain the historical pattern of the city, enabling it to maintain its unique cultural and historical value in the process of modern urbanization.

Continuous daily maintenance is key to the long-term preservation of historical dwellings. Wood is easily affected by environmental factors. Daily removal of dust, dirt, and debris can prevent moisture and corrosive substances from accumulating on the surface of wood and avoid the development of mold or insect infestation. Painting has high anti-corrosion and insect-proof capabilities, can prevent cracking on the surface of wood, avoid direct damage from ultraviolet rays, and enhance aesthetics and durability. These measures are essential for the protection and extension of the lifespan of wooden structures.

The repair or replacement of local components is also an important measure for maintaining the durability of historical dwellings. Local components usually refer to smaller parts of a building that can be repaired or replaced separately, such as Chatou, Huaban, Queti, Liangtuo, and tiles. Although these components are relatively small, they are essential to the overall structure and function of the building. Over time, these components may become irreparable due to natural aging, insect infestation, or water damage. Timely repair or replacement can prevent potential safety hazards and maintain the safety of the entire building.

Routine maintenance and repairs also help maintain the city's historical pattern. The survey results on the repair and replacement of wooden structures and components in 37 historical dwellings still habitable today indicate that the routine maintenance and repair of components such as Lin, Chuanzi, Chatou, and Liangtuo enhance the stability of the main structure ensure the continuity of the wooden structure (Figure 6) and courtyard layout (Figure 7) of the historical dwellings. The long-term repair of building components by residents has helped to preserve the structural integrity of individual buildings and promoted the continuation of the overall block cultural landscape and historical pattern of the city by protecting the courtyard layout and spatial relationships.

Jianchuan historical dwellings are famous for their unique wooden structures. This architectural style combines the geographical environment, climatic conditions, and Bai cultural characteristics of Yunnan and has a high degree of functionality and aesthetic value (Shang & He, 2015). Almost all the houses in the Jianchuan Ancient City Historical and Cultural District follow the courtyard layout of a "Sanfang Yizhaobi" or "Sihe Wutianjing" (Figure 7) because these two courtyard layouts have been followed by Bai folk houses in Dali since ancient times (Zhou & Zhang, 1994). Jianchuan County is also the county with the largest Bai ethnic group in Dali Bai Autonomous Prefecture, with the Bai ethnic group accounting for 86.67% of the total population (Jianchuan County Statistics Bureau, 2021). The courtyard layouts of two of the Ming Dynasty residences still existing today indicate that these two courtyard forms have been continuously used in this area for at least 600 years (Figure 8).

According to existing historical data, the street pattern in the urban area was also formed from the Ming Dynasty to the Qing Dynasty, and streets such as Duanjiachong, Wenzhaot, Wumafang, Zhangjiachong, and Yingpanchong mentioned in historical data still exist today (Zhao, 1988). Figure 9 shows the Map of the Urban Area of Jianchuan County in the thirty-third year of the Republic of China (1944 AD) (it is within the scope of the Jianchuan Ancient City Historical and Cultural District). It is recorded in the "Jianchuan Prefecture Chronicles of the Republic of China" (Yang, 1991), currently the oldest map of the area. As can be observed, the four main streets in the



east, west, south, and north have basically remained unchanged. The historical dwellings are an important part of the Jianchuan Ancient City Historical and Cultural District. They not only represent material heritage but also bear witness to the local culture, construction technology, and urban development. Their existence evidences the continuous development of the area from the Ming Dynasty to modern times.

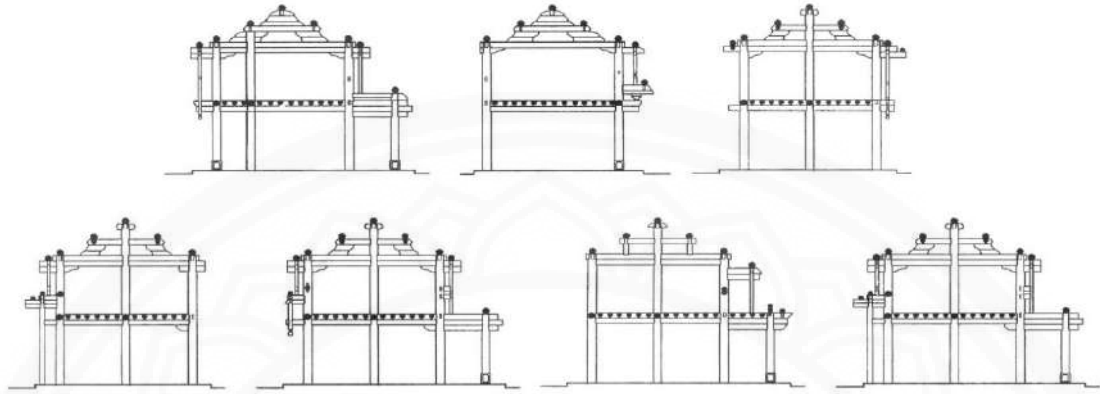


Figure 6 Basic forms of wooden structures in Bai ethnic dwellings.

Source: “Dali Series Collection, Volume 2”, p. 217.

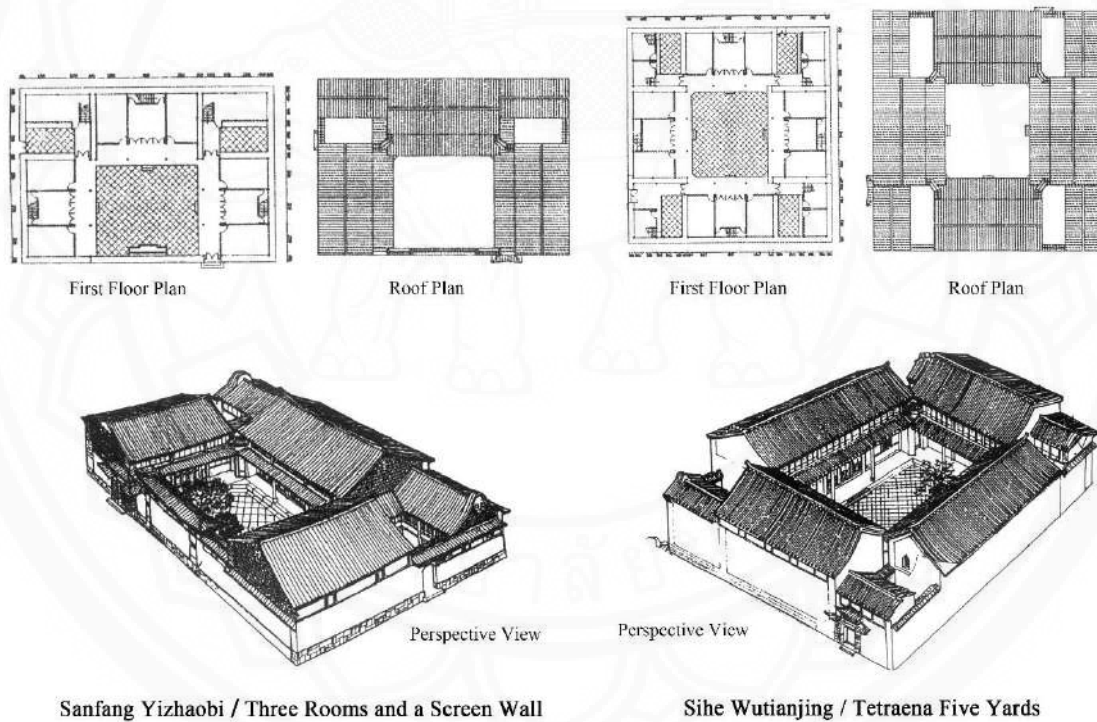


Figure 7 The two most common courtyard forms in Jianchuan.

Source: “Dali Series Collection, Architecture, Volume 2”, pp. 211–212.



Figure 8 An overhead view of two Ming Dynasty dwellings in the study area.

Source: Photo taken by the author in 2023.

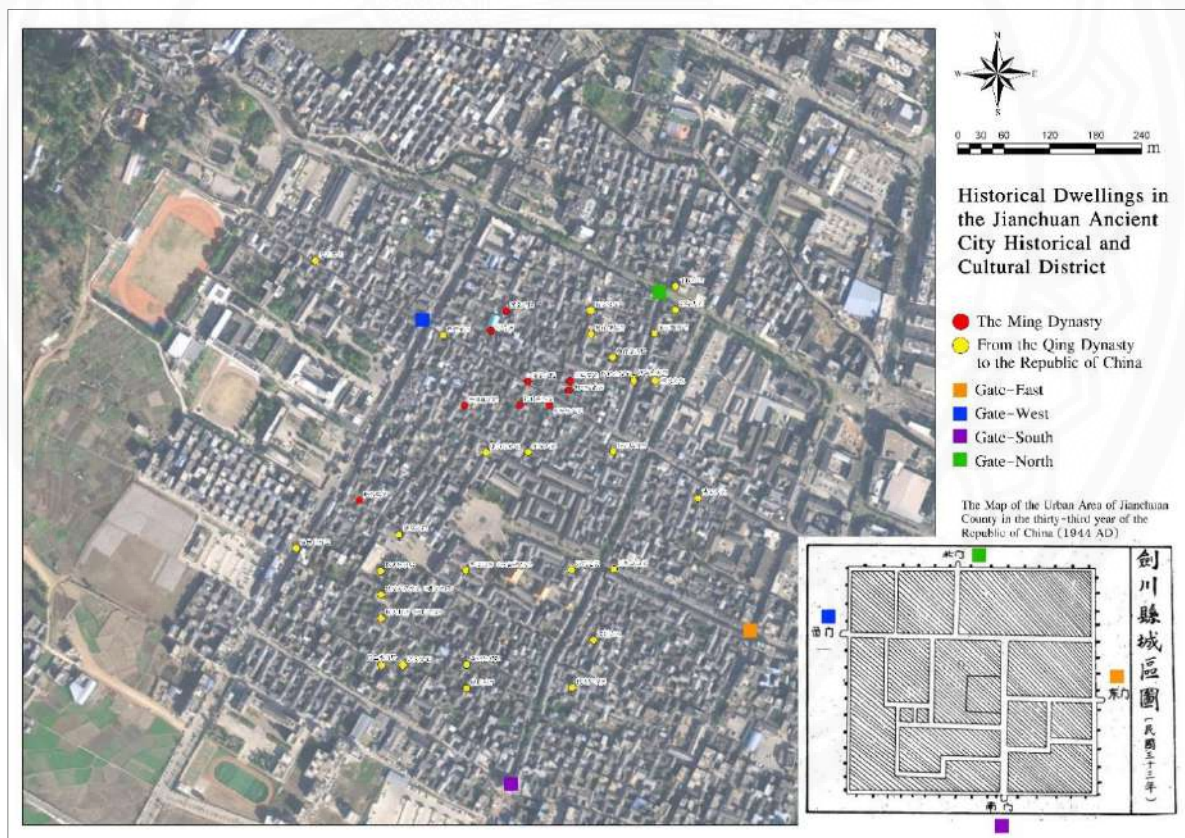


Figure 9 The diagram of the relationship between historical dwellings and the city's historical pattern.

Source: GIS (Geographic Information System) data and maps, annotated by the author, 2023–2024.

The Map of the Urban Area of Jianchuan County (1944) was obtained from

“Jianchuan County Traffic Records of Yunnan Province”, p. 3.



A Localized Maintenance Approach

The results of the investigation and analysis undertaken in this study show that the renovation process of historical dwellings relies on local traditional craftsmen and techniques, and this localized maintenance method has multiple positive effects. From maintaining the authenticity of cultural heritage to promoting local economic development, the application of local techniques not only helps to protect historical dwellings but also encourages traditional crafts. For example, the demand for vulnerable components such as Huaban, Queti, Menlou, Gizimen, and Chuang injects vitality into the development of wood processing and manufacturing industries.

In 2020, the population of Jianchuan County was 160,500. During the first half of 2024 (Jianchuan County Statistics Bureau, 2021), the county conducted 82 crafting sessions in wood carving and stone carving, benefiting 4,245 individuals. The number of practitioners in traditional wood crafts grew to over 25,000, or 16% of the entire population, in 2023 (Jianchuan County Public Employment and Talent Service Center, 2024).

The localized maintenance method emphasizes the use of local traditional building materials and crafts, usually closely related to the original construction methods used for historical dwellings. As shown in Figure 10, the owner of a historical dwelling stated that she asked local traditional carpenters to copy and install the left side of the gatehouse according to the original carved components on the right side. The practice of this localized maintenance method aligns with the principle of protecting the authenticity of cultural heritage, ensuring that its original state and characteristics are maintained in terms of materials, design, craftsmanship, and function (Feilden, 2007). It is important that the community has a deep understanding of traditional craftsmanship to ensure the dwellings are repaired in a way consistent with their cultural and historical background (Harrison, 2013).



Figure 10 Restoration of Queti on the gates of a Ming Dynasty dwelling.

Source: Photo taken by the author in 2023 and subsequently marked by the author.

Social Participation and Cooperation

The study findings revealed that many owners of historical dwellings have cooperated with different groups, such as non-governmental organizations, local governments, and universities, reflecting their indirect participation in heritage protection projects. Residents initially developed a sense of social participation and cooperation and have played a unique role in cultural communication and heritage research.

The long-term living experience of residents in historical dwellings can provide valuable first-hand information for cultural heritage research. This kind of knowledge is usually difficult for researchers to obtain through



documents or external observations. For example, owners can describe in detail the construction history and repair records of their own historical dwellings. They have actively cooperated with researchers to share this information and provide a scientific basis and practical experience for heritage protection measures (Ostrom, 1990). The role of residents has gradually changed from bystanders to active participants and contributors.

Assisting in Dwelling Management and Emergency Response

The local government has equipped historical dwellings with necessary firefighting facilities to cope with possible disaster risks. At the same time, residents have been given the responsibility to maintain these facilities, including regular inspections of equipment, timely reporting of faults, and participation in firefighting training, to ensure they can play the primary role when disaster strikes. This collaborative cooperation between the government and residents shows that the local area has taken a key step in exploring community empowerment mechanisms and embodied the following three key characteristics:

1. **A Cooperative Model with Clear Responsibilities:** The government is responsible for the planning and installation of equipment, while residents are responsible for daily maintenance, forming a cooperative model with clear responsibilities and mutual support. This division of labor not only reduces pressure on the government to carry out long-term maintenance but also enables residents to take the initiative in protecting historical dwellings.

2. **Enhance Residents' Subject Awareness:** Residents gradually strengthen their sense of responsibility for public resource management during daily maintenance, which not only helps to improve the practicality of firefighting facilities but also the overall disaster prevention capabilities of the community.

3. **Explore Sustainable Paths for Empowerment:** By delegating equipment maintenance responsibilities to residents, the government is attempting to establish a broader participation mechanism within the community. This empowerment model has injected more social momentum into the protection of historical dwellings while also providing practical experience for a more comprehensive empowerment mechanism in the future.

Residents have lived in historical wooden structures for a long time and have a deep understanding of the characteristics of wood and the surrounding environment, enabling them to identify potential risks and threats while remaining highly alert to environmental changes. In the absence of external support, this empowerment makes heritage protection more flexible and sustainable (Lowenthal, 1996).

In times of disaster, residents' familiarity with historical dwellings and cultural relics enables them to quickly organize rescue efforts without external assistance and protect cultural relics from further damage. For example, residents in an ancient Dong village quickly organized self-rescue during a fire, using traditional crafts and resources to successfully protect some cultural relics and historical buildings. Most of these buildings were wooden structures, and the community mitigated the losses by coordinating a quick response after the fire (Yun, 2015).



Figure 11 Firefighting facilities in Ming Dynasty dwellings.

Source: Photos taken by the author in 2023.

Degree and Limits of Community Empowerment

Table 5 “A Ladder of Citizen Participation” Theoretical Model

Level	Stage	Basic Indicators
Non-participation	Tokenism	Residents are used as “window displays” or symbolic presences without any actual participation rights. This typically takes the form of formal public meetings or consultations aimed at persuading rather than listening.
	Therapy	Community problems are defined as issues for which residents need “treatment”, while participation in activities seems more like educating or behaviorally modifying residents. This form of participation remains one-way and does not give residents real power.
Tokenism	Informing	Residents are informed about policies, plans, or project content, while information is transmitted in a one-way manner with a lack of feedback channels. While the right to be informed is provided, the community is not given the power to influence decision-making.
	Consultation	Residents are invited to provide opinions or feedback, but whether these opinions are adopted is entirely up to the decision-makers. This represents a preliminary stage of participation, but there is still no real power.
	Placation	Communities may have representatives on decision-making bodies, but these representatives often lack substantive influence. It is a form of symbolic empowerment, an attempt to appease community discontent.
	Partnership	A formal partnership is formed between the community and the government or organization, where residents can participate equally in decision-making. This phase marks the beginning of the community gaining substantial power.
Citizen Power	Delegated Power	Communities are given clear decision-making power in specific areas and can make independent decisions on how to conserve projects and resource allocation. This level represents true decentralization.
	Citizen Control	The community has full control over the design, implementation, and management of the project. This represents the primary stage of participation, where residents become the leaders of conservation efforts.



Through daily maintenance, residents have extended the lifespan of historical dwellings, maintained the historical pattern of the city, and demonstrated strong autonomy. In the repair of wooden buildings, residents have used local materials and traditional crafts to form a spontaneous protection and inheritance mechanism. This self-management and repair behavior shows that residents have a certain degree of resource control and independent decision-making ability, reflecting the prototype of citizen control. Residents have achieved preliminary actual management rights and can protect decision-making rights in specific areas.

The repair of wooden components directly promotes local employment as well as the development of traditional crafts and surrounding industries. The organization and execution of repair work depend on the collaboration between residents and professional craftsmen. This cooperation model conforms to the characteristics of a partnership. The community and external stakeholders (such as the government, experts, and non-governmental organizations) have established an equal, cooperative relationship in task execution.

Residents actively cooperate with different groups and exhibit a preliminary sense of social participation and cooperation. This cooperation is not limited to protecting practice but also includes cultural communication and heritage research, contributing unique value to the community. Through social participation, residents gradually have the potential to promote the further development of community empowerment mechanisms. It reflects the trend of transition from partnership to citizen power, as residents begin to take the initiative and exert influence in the partnership.

The government has equipped the historical dwellings with firefighting facilities and given residents the responsibility for daily maintenance, realizing the partial decentralization of resources and management rights. The cooperation between the government and residents shows that the community empowerment mechanism has entered the partnership stage and developed to a higher level. It shows the typical characteristics of a partnership, with the government and community achieving joint participation in management responsibilities.

However, some limitations in the process of residents' self-management and maintenance present potential challenges to improving the community empowerment mechanism and protecting historical dwellings. Residents tend to lack knowledge of technology, which may lead to improper repairs and even secondary damage. Residents may use their limited funds to meet basic living needs rather than to protect dwellings. Investment in the protection of dwellings differs among families, potentially affecting the overall community. When residents are unable to effectively manage and maintain their architectural heritage their right to self-management may be weakened, leading to increased intervention from external agencies or the government. These unfavorable factors limit residents' access to equal rights of participation and independent decision-making.

Conclusion and Suggestions

Community empowerment is a sustainable maintenance and management method that promotes the long-term stability of cultural heritage protection and resource management by enhancing the capabilities, resource control, and participation of community members. This method emphasizes the core position of residents in the protection process, enhances the endogenous motivation and autonomy of the community through the empowerment process, and achieves the coordinated development of economic, social, and cultural benefits. By investigating and analyzing the self-management and maintenance behaviors of residents and their effect on historical dwellings, the limitations of such behaviors can be identified along with the development level of the local social empowerment mechanism



to identify any shortcomings and areas where there may be room for improvement in the empowerment mechanism in special social contexts and areas of action.

The investigation and analysis of behaviors in the self-management and maintenance of historical dwellings reveal that local residents have made important contributions to the sustainable maintenance and management of historical dwellings. They have extended the life of historical dwellings and urban patterns through long-term, proactive maintenance behaviors, while the need for repair of wooden buildings has promoted the development of local employment and traditional crafts. The phenomenon that residents actively cooperate with different groups reflects that residents have a preliminary sense of social participation and cooperation, playing a unique role in cultural communication and heritage research. The government and local residents have achieved decentralization and a proactive response to collaborative management and cooperation, further enhancing the initiative of residents toward the protection of historical dwellings.

Citizen power is the advanced stage in Arnstein's "Ladder of Citizen Participation" framework, reflecting the deep participation and actual influence of residents in community empowerment. During this stage, although the empowerment mechanism is still in its infancy, meaning that residents cannot yet fully control the autonomous decision-making power of historical dwellings, they have played a leading role in the localized renovation of small components and cooperated formally with the government in assisting management and emergency response, reflecting the true decentralization of power. These trends show that the community empowerment mechanism in this area is gradually developing and showing greater potential.

The study reveals the limitations of residents in terms of insufficient professional knowledge, funding constraints, and differences in investment within the community. To improve the overall empowerment level of the community, this study combines relevant successful cases and the degree of community empowerment analysis to put forward the following suggestions, which have been proven to be effective in multiple case studies. Financial support should be provided to residents in need by establishing a special architectural heritage protection fund. Regular training and lectures should be organized involving professionals such as cultural relic protection experts, architects, and material scientists, popularizing the basic knowledge and skills of historical dwelling protection to residents, conducting systematic surveys and records, establishing historical dwelling archives and residents' autonomous repair guidebooks, to improve the community empowerment mechanism for protecting historical dwellings.

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