



# Research on the Protection Management and Sustainable Development of Chinese Baijiu Workshops under the Background of Joint World Heritage Application

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**Abstract.** Under the background of joint world heritage application, this paper firstly analyzes the values of Baijiu workshops in terms of culture, heritage preservation, and architectural art. Secondly, it discusses three main methods of protection and management, including maintaining authenticity and integrity, implementing scientific management and rational utilization, and publishing the technical and management measures for protection and management. Lastly, it explores sustainable development strategies after the joint World Heritage application, including the formulation of forward-looking plans and establishment of regulations, the establishment of collaborative mechanisms and elimination of existing risks, and the implementation of strategies promoting public welfare and sustainability. Through this research, the paper proposes that the effective protection and sustainable development of Baijiu workshops require collective efforts from the government, society, and the workshops themselves, aiming to achieve harmonious development in the economic, social, and environmental aspects.

**Keywords:** Baijiu Workshops, Joint World Heritage, Protection and Management, Sustainable Development Strategies.

## 1 Introduction

In the context of joint application of Chinese Baijiu for World heritage, Chinese Baijiu workshops are facing important issues like protection management and sustainable development. 7 Representative enterprises of Chinese Baijiu signed the "Consensus of China Baijiu Joint Heritage Application" at the joint Chinese heritage preparatory meeting of Chinese Baijiu, namely, Moutai, Wuliangye, Luzhou Laojiao, Yanghe, Fenjiu, Gujing and Lidu. They together decided to establish a joint working group on preparation of world heritage application for traditional workshops of Chinese Baijiu. They are devoted to establishing a heritage protection and management system of traditional Baijiu workshops with Chinese characteristics in line with international rules, enhancing the international influence of Chinese Baijiu [1].

As a treasure of the millennia-old brewing techniques of the Chinese nation, Chinese Baijiu possesses irreplaceable cultural and historical value. Acting as a physical carrier, traditional workshops of Baijiu have witnessed historical changes and are a fresh cultural phenomenon. However, modern shocks threaten the existence of these traditional workshops. Under such background, the joint heritage application aims to protect and pass on the value of Baijiu workshops and the aim is to achieve sustainable development. Under the background of joint World heritage application, this paper studies conservation management and sustainable development. It is in order to provide the protection of cultural heritage and the inheritance of winemaking techniques with guidance. Protecting authenticity and integrity is attained through laws and policies, cultural protection and inheritance as well as public participation, etc. Economic, social and environmental sustainability strategies ensure the sustainable development of Baijiu workshops. This study is of great significance for protecting and inheriting traditional cultural heritage and guiding the development of Baijiu workshops.

## 2 Literature Review

Under the background of joint application for World heritage, protection management and sustainable development of Chinese Baijiu workshops have become main focus of the study. However, it is essential to correctly and comprehensively understand the value of cultural heritage in culture, skill inheritance and architectural art, and the value assessment of cultural heritage is the basic work for the protection of cultural resources, as well as the need for scientific utilization and sustainable development of cultural heritage [2]. There are still some outstanding cases in the study of Baijiu workshop heritage in China. For example, the renovation of the early building of Tsingtao Brewery and the utilization of its museum, as well as the protection and utilization of the site of Chengdu Shuijing Street Baijiu House. These examples protect and reuse industrial heritage by maintaining the principles of architectural authenticity, which is beneficial to preserve historic sites and demonstrate their use [3]. Among them, communication and coordination among government, enterprises and community residents play an important role.

However, in the study of heritage of Baijiu industry in Yibin area, there are relatively a few results, which mainly concentrated on Baijiu culture, tourism and archaeology. For example, "A History of Yibin Baijiu Culture" provides a detailed explanation of the developmental trajectory of Baijiu culture in Yibin. Achievements in other researches also include studies on the characteristics and historical cultural value of Wuliangye Baijiu culture as well as the Baijiu industry in the Yibin region. As for tourism, there are initial explorations on the development of tourism resources which are related to the Yibin Baijiu industry. There are also researches on the development models for tourism of Baijiu culture. In the field of archaeology, researches mainly cover the investigation and analysis of ancient workshops as well as sites in the Yibin region [3].

Chen Yun explored the conservation value and management methods of traditional Chinese Baijiu workshops in the article titled "Research on the Characteristics and Con-

ervation of Traditional Chinese Baijiu workshops". The article points out that traditional Chinese Baijiu workshops which act as tangible carriers of Chinese Baijiu brewing techniques, possess rich cultural, historical, and social values. When regarding their value recognition, these workshops represent different developmental stages in the history of Chinese Baijiu production. It has significant influence on the industry and holds high architectural art value. In terms of their conservation and management, there are some methods put forward including preserving the authenticity and integrity of traditional Chinese Baijiu workshops, scientific management, rational utilization as well as the publication of protection and management techniques. Additionally, Chen Yun mentioned strategies for sustainable development such as creating forward-looking plans, establishing cooperative mechanisms, addressing potential risks, and implementing strategies for public welfare and sustainability [4].

Above all, the conservation and sustainable development research of Chinese workshops has drawn attention from academic communities and relevant industries. Chen Yun's findings from his study and case studies of other alcoholic beverage industrial heritage have offered significant references and inspiration for this paper, which will provide the foundation for further in-depth research.

### **3 The Value of Traditional Baijiu Workshops in the Context of Joint World Heritage Nomination**

#### **3.1 The Cultural Value of Traditional Baijiu Workshops**

Cultural value of traditional Baijiu workshops exists in the profound historical and intangible cultural heritage that they maintain. As an ancient Chinese brewing technique, Baijiu is more than just a technical process. It is a cultural practice. Traditional Baijiu workshops reflect understanding and transformation of humanity towards natural world, representing wisdom and diligence of ancient people, as well as their expectation and pursuit of a better life. The traditional techniques employed in Baijiu workshops are tangible representations of Chinese traditional culture such as unique fermentation methods, distinctive distillation equipment, and special storage techniques, which have significant academic and aesthetic values [5]. In addition, produced in traditional workshops, Baijiu is also an integral part of Chinese dining culture. It has a profound effect not only on Chinese traditional festivals and social activities but also greatly formed habits and lifestyles of eating in China. In addition, these workshops of traditional Baijiu carry a wealth of social and historical information, including the transmission of craftsmanship, the formation of communities, and economic changes, where we can see the traces of history and feel the depth of culture.

#### **3.2 The Inheriting Techniques Value of Traditional Baijiu Workshops**

The value of inheriting the craftsmanship of traditional Baijiu workshops can be listed from two aspects. Firstly, traditional Baijiu workshops act as crucial carriers of China's traditional brewing techniques. These techniques encompass, but are not limited to,

special fermentation, distillation, and storage methods. The fine craft techniques and unique brewing environments have contributed to diverse styles and characteristics of Baijiu, resulting in the diversity of Chinese Baijiu [6]. Secondly, the value of craftsmanship inheritance in traditional Baijiu workshops is unique since it provides valuable tangible references for future generations to explore Chinese brewing history and study ancient brewing techniques. The artisans in these old workshops pass down unique skills from generation to generation, such as making fermentation starter, selecting raw materials, fermenting, distilling, and storage. These are demonstrations of rich experience and exquisite craftsmanship. This unique brewing technique is not only a significant component of ancient Chinese scientific technology but also an essential aspect of intangible cultural heritage. Under the background of globalization and industrialization, the value of inheriting the craftsmanship of traditional Baijiu workshops becomes even more significant. While preserving and passing on these ancient techniques, they also continuously provide inspiration and motivation for the innovation and development of Chinese Baijiu.

### **3.3 The Architectural Artistic Value of Traditional Baijiu workshops**

The architectural artistic value of traditional Baijiu workshops is reflected in their distinctive architectural style, layout and design. These workshops typically exhibit traditional Chinese architectural features, such as grey tiles, black eaves, wooden structures as well as a courtyard-style layout, which represent the aesthetic characteristics and humanistic ideals of ancient Chinese architecture. Their design and layout are aimed at achieving the optimal efficiency of the Baijiu production process. For example, design of cellar considers temperature and humidity control and layout of the fermentation areas is conducive to the work of the artisans. These aspects demonstrate the fusion of architectural art with practical functionality [6]. Moreover, the architectural structures and associated facilities of these old workshops, including rooms for fermentation starters, cellars, and fermentation pits, are rich in historical information and cultural significance. They provide practical evidence for the study of all aspects of social life in ancient China, economic technology, etc. To a certain extent, the architectural artistic value of traditional Baijiu workshops also embodies the philosophical concepts and value orientations of traditional Chinese culture, such as the idea of unity between humanity and nature and the principle of harmonious coexistence [7]. These characteristics make traditional Baijiu workshops highly unique and irreplaceable in the process of a joint World Heritage nomination.

## **4 Protection and Management Approaches in the Context of Joint World Heritage Nomination**

### **4.1 Maintain the Authenticity and Integrity of Traditional Baijiu workshops**

The authenticity of the workshop covers various aspects, including its architectural style, production processes, brewing techniques, etc, while integrity contains all its

components, including buildings, equipment as well as the surrounding environment [8].

To protect the authenticity of old workshops, three levels need to be considered. Firstly, at the architectural level, we should adhere to the principle of minimal intervention to guarantee that any modifications to the buildings should try their best not to change the style, structure and materials of original architecture. Secondly, at the production process level, it is necessary for in-depth research and documentation of traditional brewing techniques to ensure that they are strictly followed in day-to-day production. Thirdly, at the brewing technique level, efforts should be made to unearth and compile the details and key points of these techniques, which should be passed on to future generations through certain ways.

To protect the integrity of old workshops, several aspects should be considered. Firstly, in terms of on-site preservation, a comprehensive and multidimensional survey and documentation of the old workshops such as their layout, buildings, equipment, processes, etc, should be conducted. It is also necessary to carry out regular maintenance and repair to prevent damage caused by the passage of time. Secondly, as for digital preservation, modern technological tools such as 3D scanning and virtual reality can be employed to create digital models of the old workshops. This helps in preserving and presenting the completion of these workshops. Thirdly, we should encourage community and engagement to actively involve community members for the conservation and management of old workshops. Through their participation, these workshops can become an integral part of community life to guarantee that they can enjoy better protection.

#### **4.2 Take Scientific Management and Rational Utilization as Principles**

Conservation and management method which is guided by the principles of scientific management and rational utilization plays a crucial role in ensuring the stability and continuity of traditional Baijiu workshops during World Heritage nomination process as well as their long-term prosperity following a successful nomination.

Scientific management firstly requires us to conduct comprehensive and in-depth research on traditional Baijiu workshops based on facts and data. This covers research into the history, architecture, techniques, processes as well as all relevant aspects of workshop. It also contains studying the roles and impacts of workshop in various circumstances such as the community, market, and culture. In addition, regular assessments and feedback are necessary to provide an objective evaluation of management effectiveness, which helps to enable the timely identification of issues and their correction [9].

On the other hand, rational utilization requires us to explore the potential social and economic value of old workshops while protecting them. For instance, we can attract more visitors and consumers by organizing various cultural activities, such as exhibitions of distillation techniques and lectures on liquor culture. At the same time, this can stimulate the development of related industries, including tourism, dining, and retail. In addition, we can use digital methods, such as online streaming and VR presentations,

to expand the influence of old workshops, which can increase their recognition and enjoyment on a wider scale.

It's necessary for us to notice that scientific management and rational utilization are not isolated but closely interrelated. Only through scientific management can we ensure that the conservation efforts for old workshops are carried out in an organized and effective manner, thus providing a reliable foundation for their rational utilization. Similarly, only through rational utilization can we truly present and retain the value of old workshops, thus providing ongoing motivation for their long-term conservation.

### **4.3 Techniques and Management Measures of Publishing and Disclosing Conservation Management**

Transparent disclosure and professional publication can enhance scientific and operational aspects of conservation efforts. It can also further increase engagement and awareness of the public.

Techniques and management measures of the public conservation management can be achieved through various approaches. Through online, it can be publicly released through government websites, social media platforms, digital databases and other online avenues. Through offline, notice boards and display signs can be set up at the workshop site, museums, communities, and other physical locations [10]. Additionally, organizing special lectures and public engagement activities can provide a more comprehensive understanding of these measures for the public. By disclosing these measures, it can not only strengthen trust and engagement of the public, but also guide them to participate in the conservation and utilization of traditional Baijiu workshops in a more scientific and civilized manner [11].

To publish techniques and measures of conservation management, we need the assistance of professional publishing organizations to compile and edit these measures into books and disseminate them through various forms such as books, magazines, reports, etc [12]. This form of publication can not only comprehensively and systematically explain the theory and practice of conservation management but also showcase multiple cases and practices, providing essential reference materials for research, education, and promotion of conservation management. Additionally, these publications can also serve as part of the materials for a World Heritage nomination, demonstrating our efforts and achievements in conservation management to both domestic and international audiences [13].

Techniques and management measures of announcing and publishing protection management is a scientific, transparent, and participatory management approach. It can improve the quality and effectiveness of conservation management as well as promote social value and cultural influence of traditional Baijiu workshops. Therefore, we should make full use of this approach to inject new vitality and innovation into the conservation management of traditional Baijiu workshops.

## **5 Joint World Heritage Nomination and Sustainable Development Strategies for Baijiu workshops**

### **5.1 Formulate Forward-Looking Planning and Establish Rules and Regulations**

Formulating forward-looking plans and establishing regulatory frameworks is a sustainable development strategy which is guided by planning as well as supported by regulations. It can promote the conservation and development of traditional Baijiu workshops and also promote their social status as well as international influence [14].

It is a systematic, comprehensive, and long-term process to develop forward-looking plans. Firstly, we need to predict chances and challenges that traditional Baijiu workshops may face in the future according to their current situation and trends. Secondly, we should clearly define goals of conservation and development for these workshops, considering their intrinsic values such as history, culture, craftsmanship as well as external factors like economics, society and the environment [15]. Finally, we need to identify the pathways as well as ways to achieve these goals, including conservation measures, development projects and management mechanisms. A forward-looking plan not only provides direction for the conservation and development of traditional Baijiu workshops but also serves as a foundation for related decision-making and operations.

It is a means of standardization and protection to establish regulatory frameworks. Regulatory frameworks should clearly define the principles of conservation, scope of protection, responsibilities of management, procedures of operation, assessment and evaluation as well as penalty measures for traditional Baijiu workshops. These regulations should safeguard the interests of these workshops while also consider welfare, economic feasibility, social acceptance, environmental sustainability and other factors of the public. The development and implementation of regulatory frameworks not only promote the organized, efficient, and equitable management of traditional Baijiu workshops but also enhance engagement and satisfaction of the public [16].

### **5.2 Establish Collaborative Mechanisms and Eliminate Existing Risks**

It is a crucial avenue to establish a collaborative mechanism for the sustainable development of Baijiu workshops. This mechanism involves diverse stakeholders, including government departments, Baijiu workshops, community residents, research institutions, non-governmental organizations, etc. Departments of government provides policy support and regulation. Baijiu workshops are responsible for production and sales. Community residents join in conservation and heritage activities. Research institutions offer technical support and consulting services. Also, non-governmental organizations handle promotion and community development. This collaborative mechanism can pool the resources and strengths of all parties to jointly promote the conservation and development of Baijiu workshops [17].

It is a crucial strategy to eliminate existing risks to ensure the safe and stable operation of Baijiu workshops. This involves addressing environmental hazards and safety

risks primarily. Environmental hazards typically arise from pollution and waste disposal during the production process. These risks can be mitigated through technology of environmental protection and improvement of equipment, as well as methods of waste recycling and reuse. Safety risks primarily stem from equipment aging and improper operation. They can be addressed by conducting regular maintenance and upgrades of equipment, as well as providing employees with safety training and supervision. This strategy for risk elimination ensures safety of production and environmental quality of Baijiu workshops, thus enhancing public trust and support [18].

Establishing collaborative mechanisms and eliminating existing risks is a strategy for sustainable development and is based on cooperation and safety. It can not only drive the stable operation and continuous development of Baijiu workshops but also enhance their sense of social responsibility and public recognition.

### **5.3 Strategies for Non-Profit and Sustainable Development**

In the strategy of joint World Heritage nomination and sustainable development of Baijiu workshops, non-profit and sustainable development strategies play a crucial role in ensuring the long-term survival and prosperity of these workshops. The core of this strategy is to balance commercial interests and social responsibility. It also maintains and enhances ecosystem, social value, and economic benefits of the workshop to achieve sustainability [13].

Non-profit development strategy emphasizes the special status and significance of Baijiu workshops as cultural heritage. It calls for these workshops to consider not only their economic interests but also to fully play their role in the community. This can be achieved through activities such as training, education, exhibitions, public events, etc., to help more people understand the craftsmanship as well as cultural significance of Baijiu production. In doing so, it enhances the social value and public influence of Baijiu workshops [19]. This non-profit strategy is beneficial to increase public recognition and support for these workshops. It can also help gather more social resources for their conservation and development.

The strategy of sustainable development emphasizes an environmentally friendly and resource-efficient development path for Baijiu workshops. It calls for the use of eco-friendly production technologies and equipment which is to gain clean production with zero emissions. In addition, it encourages the utilization of technological advancements to improve production efficiency and product quality while conserving resource consumption. Through product innovation and diversification, it explores new markets to enhance economic benefits. This sustainability strategy not only ensures the economic stability and growth of Baijiu workshops but also protects and improves the environment, gaining a triple bottom line of economic, social, and environmental benefits.



## 6 Conclusion

In conservation management and sustainable development of traditional Baijiu workshops, joint World Heritage nomination undoubtedly injects new vitality and possibilities. Nevertheless, we must also recognize that it requires collective efforts and wisdom of government, society as well as workshops themselves to achieve effective protection and sustainable development of traditional Baijiu workshops. In this process, we should not only prioritize economic benefits but also emphasize the inheritance and promotion of cultural value. The aim is to achieve harmonious development in the economic, social as well as environmental aspects, making traditional Baijiu workshops a real cultural heritage and pride of our nation.

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