# Original Research Article

# Research on the flow of urban and rural elements in the development of rural tourism in the digital era—Taking China Baimaguan as an example

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*Abstract:* China has made significant progress in coordinating urban and rural development, promoting new urbanization, and advancing rural development. The principal contradiction in Chinese society has shifted to the contradiction between the people's ever-growing needs for a better life and the unbalanced and inadequate development, which is particularly prominent in rural areas. Currently, the allocation of rural elements still presents a state of "one scarcity and three difficulties": few types of mobile elements, difficulty in outflow, difficulty in inflow, and even greater difficulty in retention. China's rural revitalization strategy encompasses the construction of rural culture and tourism, emphasizing the application of digital technologies. How rural tourism in the digital era can promote the flow of urban and rural elements will directly affect the success of the rural revitalization strategy. This paper takes the Baimaguan Scenic Area in Deyang, Sichuan, as an example to explore this issue.

Keywords: Digital era; Rural tourism; Urban-rural element flow; Baimaguan

## 1. Introduction

Since the 18th National Congress of the Communist Party of China, significant progress has been made in coordinating urban and rural development, promoting new urbanization, and advancing rural development. The principal contradiction in Chinese society has shifted to the contradiction between the people's ever-growing needs for a better life and the unbalanced and insufficient development, which is particularly prominent in rural areas. In 2020, the Central Committee of the Communist Party of China and the State Council issued the "Opinions on Building a More Perfect Market-Oriented Allocation System and Mechanism for Factors of Production," emphasizing that "the market-oriented allocation of factors of production is an important part of adhering to and improving the basic socialist economic system and accelerating the improvement of the socialist market economy." Currently, the allocation of rural factors of production still generally presents a state of "one scarcity and three difficulties": few types of mobile factors, difficulty in the outflow of factors, difficulty in the inflow of factors to rural areas, and forming a virtuous cycle of talent, land, capital, industry, and information in rural areas are urgent needs for promoting rural revitalization and integrated urban-rural development.

The flow and allocation of factors are manifestations and results of urban-rural interactions<sup>[1]</sup>. Preston(1975) argues that the flow of urban and rural factors is reflected in five aspects: population flow, goods flow, capital flow, social services, and public services<sup>[2]</sup>. Gugler (1991)proposes that the flow of urban and rural factors involves the bidirectional flow of people, goods, technology, money, information, and ideas between urban and rural areas<sup>[3]</sup>. Domestic scholars have studied the types of factors from different perspectives. For example, from an urban-rural perspective, China's urban and rural factor markets exhibit obvious dual characteristics, with

rural areas mainly possessing "primitive" factors such as land, surplus labor, and ecological environment, while urban areas possess more abundant "advanced" factors such as talent, capital, information, technology, and management concepts<sup>[4]</sup>. From the perspective of the form of factors, labor, land, capital, means of production, and means of subsistence are tangible and referred to as hardware; technology and information are intangible and referred to as software<sup>[5]</sup>. Currently, there is no unified understanding of the connotation and extension of urban and rural factors in academia. With the changes in the characteristics of the times and urban-rural relations, research on traditional production factors such as land, labor, and capital continues to deepen, while innovative production factors such as technology and data are increasingly attracting attention. At the level of factor flow, Xiang Yanping(2021) believes that rural tourism can accelerate the flow and integration of production factors such as capital, talent, information, technology, and management<sup>[6]</sup>. Li Cui (2021) argues that the investment, use, and rational allocation of various resources in the development and utilization of rural tourism, especially the circulation of financial resources, information resources, and human resources in rural areas, will determine the extent and effectiveness of the development and utilization of rural tourism resources<sup>[7]</sup>. Some scholars also believe that the core essence of the construction elements of tourism-oriented villages is to invest natural ecology and traditional culture as resource elements into economic production, with ecological protection and cultural inheritance as common value pursuits<sup>[8-9]</sup>.

In October 2017, the 19th National Congress of the Communist Party of China began to deploy the construction of a strong cyber nation, a digital China, and a smart society, and for the first time proposed the implementation of the rural revitalization strategy. In September 2018, the Central Committee of the Communist Party of China and the State Council issued the "Rural Revitalization Strategic Plan (2018-2022)," clearly stating the need to develop rural tourism and characteristic industries, and promote the deep integration and innovative development of culture, tourism, and other industries. The 2020 Central Document No. 1, "Opinions of the Central Committee of the Communist Party of China and the State Council on Doing a Good Job in Key Areas of 'Agriculture, Rural Areas, and Farmers' to Ensure the Realization of a Comprehensive Well-off Society on Schedule," emphasized the acceleration of the application of modern information technologies such as the Internet of Things, big data, artificial intelligence, and fifth-generation mobile communication networks in rural revitalization, and the launch of national digital rural pilot projects. Clearly, even in the era of the digital economy, rural tourism is still regarded as an "important new force in assisting rural revitalization" due to its unique industrial linkage capabilities, entrepreneurial and employment driving capabilities, and strong village and wealth-building effects. The 2021 Central Document No. 1 specifically mentioned "leisure agriculture," "rural tourism boutique routes," and "the implementation of the digital rural construction and development project." The 2022 "Central Document No. 1," "Opinions of the Central Committee of the Communist Party of China and the State Council on Doing a Good Job in the Key Work of Comprehensively Promoting Rural Revitalization in 2022," pointed out that "encouraging various regions to expand the multiple functions of agriculture and tap the multiple values of rural areas, focusing on the development of agricultural product processing, rural leisure tourism, rural e-commerce, and other industries."

Deyang is located in the northeastern part of the Chengdu Plain, 58 kilometers from Chengdu, the capital of Sichuan Province. It is an important regional central city in the Chengdu-Chongqing Economic Zone and an important growth pole in the Chengdu Economic Zone, as well as an important part of the Chengdu tourism portal circle. As of January 2024, the city administers 2 districts (Jingyang District and Luojiang District), 1

county (Zhongjiang County), and 3 county-level cities (Guanghan City, Shifang City, and Mianzhu City). Among them, Luojiang District was established in 2017 after the former Luojiang County was abolished and reorganized. Deyang has a rich historical and cultural heritage, and its abundant tourism resources are impressive. The world-renowned Sanxingdui ancient Shu civilization site within its territory is hailed as the ninth wonder of the world. Deyang was selected as one of China's excellent tourism cities as early as 2007, and Baimaguan Town in Luojiang District was named a characteristic cultural tourism town by the Sichuan Provincial Party Committee and Provincial Government in April 2019. However, in stark contrast, although the official tourism promotional copy of the Deyang government has always been "Sanxingdui in the south, Baimaguan in the north," the fame of Baimaguan in Luojiang is far less than that of Sanxingdui in Guanghan. Many people even say they have never heard of Baimaguan, which is also a 4A-level scenic spot like Sanxingdui. In the digital era, studying the flow of urban and rural elements in the development of rural tourism with Baimaguan Town in Luojiang District as an example has extraordinary theoretical and practical significance.

# 2. New models of urban and rural element flow in rural tourism empowered by digital technology

Rural tourism can achieve a leap from agriculture to the service industry, break the geographical closure of rural areas, build bridges for the flow of urban and rural elements, and accelerate the gathering of capital, talent, information, technology, and management elements in rural areas, thereby optimizing the allocation of resources for rural development. Undoubtedly, promoting farmers' income growth and helping farmers escape poverty are the direct goals of rural tourism development. Many current policies focus on the income-increasing effects of rural tourism on farmers, treating rural tourism as an important means to solve the "three rural issues." In the era of the digital economy, new models of urban and rural element flow have emerged in rural tourism empowered by digital technology.

#### 2.1. Agricultural new pocket economy innovates the flow of funds in rural tourism

The agricultural new pocket economy refers to an investment model where individuals invest small amounts of money in rural tourism projects through online platforms and receive certain returns. The agricultural new pocket economy is a new financing model developed on the basis of traditional agricultural crowdfunding, supported by new-generation information technology, and has the following characteristics:

1) Data credit is an important basis for initiating project financing in the agricultural new pocket economy. The agricultural new pocket economy requires project initiators to have a good data credit rating based on internet platforms. Project initiators publish rich and diverse short videos, live broadcasts, virtual displays, and other tourism-related content on new internet platforms. The number of published content, content authenticity, information richness, viewing traffic, live broadcast participation, platform followers, content likes, and other indicators constitute the evaluation criteria for the value of the project initiator's data-based intangible assets, and can also form a comprehensive data credit evaluation system for the project initiator. The value of data-based intangible assets is an important basis for project initiators to carry out project financing.

2) Rural tourism projects that carry out project financing should achieve operational visibility. The Baimaguan Scenic Area in Luojiang District, Deyang City, is a national 4A-level scenic area with many attractions such as Baimaguan, Pang Tong Temple, and the Golden Ox Ancient Road (the earliest national road in the world). In addition, Baimaguan is home to a 10,000-mu ecological agricultural industrial park

for the nationally recognized geographical indication product, the Imperial Concubine Jujube. Taking Wanfo Village, which has a 4,000-mu Imperial Concubine Jujube industrial park as an example, the village adheres to the principle of "using fruit as a medium," opening up the "industrial orchard + leisure tourism + eco-cultural tourism" model, and organizes an annual Imperial Concubine Jujube Eco-Tourism Festival, hoping to attract tourists from all over and help local villagers increase their income. Therefore, when initiating project construction and operation, Baimaguan tourism project initiators should promote the disclosure of production and operation information, and use technologies such as short videos, cloud live broadcasts, and virtual live broadcasts to build a "transparent orchard" while keeping core technical processes and information confidential. This allows investors to monitor and visit project progress and implementation through the cloud, fully understand the enterprise's production and operation status, enhance investment confidence, and strengthen project supervision.

3) Rural tourism projects that carry out project financing should achieve the visibility of the use of raised funds. When using the agricultural new pocket economy model to raise funds from the internet, rural tourism project initiators should conduct the process in a digital RMB payment environment, ensuring that the use of raised funds is controllable and traceable, enhancing fund security, and avoiding adverse phenomena such as illegal misappropriation of raised funds and absconding with funds.

#### 2.2. Rural knowledge-based new gig economy promotes urban-rural knowledge flow

The so-called internet-era gig economy refers to a new economic model based on network platforms, with independent and capable workers as the main body, fragmented tasks as work content, and flexible working hours, locations, and methods, maximizing the matching of supply and demand. The rural knowledgebased new gig economy refers to a new economic form where various professional and technical personnel participate in the production and service process of the new gig economy, providing technical, management, and other knowledge-based services to agricultural and rural production and operation enterprises, organizations, and individuals. At present, Baimaguan cooperates with Sichuan Agricultural University to regularly invite relevant horticultural experts to provide short-term village guidance. However, such cooperation is far from meeting the needs of the majority of farmers. Therefore, the rural knowledge-based new gig economy can bring knowledge and technology to rural development and build new channels for knowledge and technology talent to go to the countryside. The rural revitalization cloud think tank is the carrier platform for the rural knowledge-based new gig economy. By accessing various internet-connected terminals, the demand side of rural revitalization think tank services can obtain the required think tank services anytime and anywhere, including but not limited to policy interpretation, public opinion guidance, policy advice, social services, data sharing, and academic exchange knowledge services. Taking Baimaguan Town as an example: (1) Knowledge-based new gig workers can provide farmers with consultations on Imperial Concubine Jujube planting technology and marketing strategies, as well as agricultural subsidy policy consultations. (2) Provide research and investigation, technical feasibility analysis, market prospect analysis, ecological environmental protection, and policy support consultations for individuals, enterprises, and other organizations interested in investing in Baimaguan, helping external capital enter Baimaguan. In recent years, Baimaguan Town has focused on building a sports and leisure characteristic town, successively introducing commercial investments to build a motor sports base, outdoor sports base, camping base, grass skiing field, and small ball club, launching off-road karting, real-person CS, expansion training, jungle adventure, grass skiing, golf, and other sports and entertainment projects, and jointly hosting national-level competitions such as the China All-Terrain Vehicle Championship (Luojiang Station), ATV Carnival Orienteering Competition, and National Mountain Bike Elite Challenge. However, the current situation is far from satisfactory, with few tourists in the Baimaguan scenic area, abandoned or unused project facilities everywhere, and cooperation with original business partners at a standstill. The sports events held have little fame and few participants, and the construction of the sports and leisure characteristic town exists in name only. Therefore, better use of rural revitalization think tank services is urgently needed for Baimaguan Town. (3) Provide legal and dispute resolution consultation services. Baimaguan faces many problems in the development of rural tourism, such as the contradiction between resource development and protection, market disorder, and damage to cultural resources. The existence of these problems not only affects the sustainable development of rural tourism but also poses a threat to the local ecological environment and cultural heritage of Baimaguan. Baimaguan Town also urgently needs to pay high attention to the legal protection of rural tourism.

# **3.** Countermeasures to promote the development of new models of urban and rural element flow in rural tourism empowered by digital technology

#### 3.1. Building a policy environment that incentivizes new economic forms

Promoting the development of the agricultural new pocket economy and the rural knowledge-based new gig economy requires clarifying relevant legal regulations and providing better policy incentives. Formulate new laws and regulations to encourage the development of the "double-zero economy," such as enacting laws to promote financing for entrepreneurial enterprises, issuing regulations on the supervision of private equity funds for agricultural development, and allowing small and medium-sized enterprises to carry out various forms of financing activities through internet platforms under the premise of adequate supervision, while strengthening investor protection. Formulate and implement tax and insurance systems that encourage the development of the "double-zero economy," providing tax reduction and exemption incentives for small and medium-sized enterprises engaged in the rural knowledge-based new gig economy, raising the tax threshold and lowering the tax burden for individuals who earn income through the rural knowledge-based new gig economy, and standardizing and simplifying the process of paying pension and medical insurance for new gig workers.

#### 3.2. Promoting the construction of new rural infrastructure systems

The agricultural new pocket economy and the rural knowledge-based new gig economy cannot be separated from the support and assistance of new information infrastructure. For example, in the agricultural new pocket economy model, investors need to monitor project progress and visit production processes through the internet, and project initiators need to use big data and cloud computing functions to analyze data such as their own fan base and completion rate, forming digital intangible assets, and further carry out financing in the application scenarios of digital RMB. Rural areas are vast and sparsely populated, and Baimaguan, like other towns, has experienced hollowing out, making it difficult to extend traditional information infrastructure to these areas. Conducting video live broadcasts and virtual reality live broadcasts in such places requires the construction of a new information infrastructure system. Therefore, efforts should be made to increase investment in internet infrastructure construction in rural areas, support the construction of 5G base stations in rural areas, and strive to bridge the urban-rural "digital divide." As an important part of Baimaguan's development of characteristic tourism, Imperial Concubine Jujube needs to accelerate the digital and intelligent transformation of storage and

preservation, energy-saving cold storage facilities in digital origin warehouses, and build a big data platform for agricultural product cold chain logistics that includes traceability tracking and product service functions.

#### 3.3. Cultivating new forms and models of rural industrial integration

The agricultural new pocket economy and the rural knowledge-based new gig economy model are vivid manifestations of the cross-integration of rural primary, secondary, and tertiary industries. Through online and offline, virtual and physical integration, new forms and models with good growth potential and high added value, such as rural tourism, direct agricultural supply, and remote consultation, have been spawned, achieving the symbiotic integration of agriculture with tourism, e-commerce, consulting services, and other industries through the "agriculture +" combination. For example, the mature operation of the e-commerce live broadcast model will create a stable carrier for the agricultural new pocket economy, consolidating investors' recognition and trust in the project environment; the steady and efficient remote consultation services can generate spillover effects, making the application area of the rural knowledge-based new gig economy model more extensive. Therefore, further cultivating new forms and models of rural industrial integration will provide strong support for the development of the "double-zero economy."

Taking Baimaguan as an example, the Baimaguan Scenic Area is a national 4A-level scenic area with many attractions such as Baimaguan, Pang Tong Temple, and the Golden Ox Ancient Road (the earliest national road in the world), and is the site of the rise and fall of the Shu Han regime during the Three Kingdoms period. Baimaguan Town, where the Baimaguan Scenic Area is located, covers an area of 38.83 square kilometers, administers 8 administrative villages and 65 villager groups, and also has the Wanfo Temple, which was built in the Tang Dynasty, the Panlong Great Bend, the first choice for spring flower viewing and outings, and the 10,000-mu ecological agricultural industrial park for the Luojiang agricultural product geographical indication product, Imperial Concubine Jujube. Therefore, Baimaguan's current focus on the cultural function of agriculture, tapping the attractions of pastoral scenery, folk customs, ancient buildings, and characteristic foods, and building a new model of "agriculture + cultural creativity + tourism" according to local conditions is in line with the requirements of the digital era.

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